















AMERICAN ORNITHOLOGY;

OR,

THE NATURAL HISTORY

OF THE

BIRDS OF THE UNITED STATES.

ILLUSTRATED WITH PLATES

Engraved and Colored from Original Drawings taken from Nature.

BY ALEXANDER WILSON.

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PREFACE.

BOOKS on Natural History, calculated to improve the taste, to enlarge the understanding and better the heart, as they are friends to the whole human race, are generally welcomed by people of all parties. They may be compared to those benevolent and amiable individuals, who, amidst the tumult and mutual irritations of discordant friends, kindly step in to reconcile them to each other, by leading the discourse to subjects of less moment, but of innocent and interesting curiosity; till the mind forgets its perturbations, and gradually regains its native repose and composure. So comes, in these times of general embarrassment, dispute, and perplexity, the peaceful, unassuming pages of American Orni-THOLOGY. With little to recommend them but the simplicity of truth, and some faint imitations of a most glorious and divine Original, they may, nevertheless, calm for a time the tumult of the mind, communicate agreeable amusement, and suggest hints for instruction. At least, these are some of the principal objects to which they have been zealously directed,

Unforeseen and unavoidable circumstances, which it is unnecessary to recapitulate, and over which the author had no control, have retarded the publication of the present volume beyond the

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usual and stated period. Complaints and regret, for what is irrecoverable, would be as unavailing, as apologies for what could not
be prevented, would be improper. He will only on this subject
remark, that a recurrence of similar obstacles not being likely
to take place, and the plates of the fourth volume, now in the
hands of the engraver, being in considerable forwardness, every
exertion will be made, consistent with the correct execution of the
work, to atone for past delays, by its early and prompt publication.

With respect to the contents of the present volume, the author has a few hints to offer to the consideration of the intelligent reader, whose favorable opinion in behalf of his labours he is most anxious to merit.

Should there appear in *some* of the following accounts of our native birds, a more than common deficiency of particulars as to their manners and migration, he would beg leave to observe, that he is not engaged in copying from *Museums* the stuffed subjects they contain; nor from books or libraries the fabulous and hearsay narratives of *closet naturalists*. A more laborious, and, as he trusts, a more honorable duty is prescribed him. He has examined the stores of living Nature for himself; and submitted with pleasure, to all the difficulties and fatigues incident to such an undertaking. Since he had last the honor of presenting himself before the public, he has traced the wilds of our western forests, alone, for upwards of seven months; and traversed, in that time, more than three thousand miles, a solitary, exploring pilgrim. As nearly one half of the whole number of birds contained in the following sheets (part of the products of his late tour), are such as

have never before been taken notice of by naturalists, a complete detail of their habitudes and manners cannot reasonably be expected. To collect these, years of patient and attentive observation are requisite. What with truth and accuracy he *could* do, he has done. In the drawings he has aimed at faithful and characteristic resemblances of his subjects.—In the literary part at a clear and interesting detail of their manners, as far as these have come to his knowledge; and to future observation must be left the task of filling up those chasms in the history of some of them, which the so recent discovery of their species has rendered unavoidable.

To gentlemen of leisure, resident in the country, whose taste disposes them to the pleasing and rational amusements of natural history, and who may be in possession of facts, authentic and interesting, relative to any of our birds which have not yet made their appearance in this work, the author again earnestly and respectfully addresses himself. Such is the barrenness of the best European works on the feathered tribes of the United States, and so numerous are the mistakes (to call them by the gentlest name) with which they are disfigured, that little has been, or indeed can be, derived from that quarter. On his own personal exertions and observation the author has chiefly depended. But, numerous as his subjects are, scattered over an immense territory, and pursuing their vast and various migrations through different regions, as want of food or change of seasons inspire, unless Heaven would kindly accommodate him with wings, to follow as an aerial spy on their proceedings; or, (which is more likely to happen) his fellow-citizens, lovers of their country, and well wishers to its arts and literature, will condescend to communicate some of the numerous facts which many of them have, doubtless, witnessed among the feathered part of the creation around them; his work will lose more than half its worth; and, with all his endeavours, he must despair of doing complete justice to the subject.

Every communication, having this for its object, will be acknowledged with thankfulness; and receive that degree of attention which the importance of the facts it contains may require. By such combined exertions, and reciprocity of information, we shall do honour to this branch of science; and be enabled to escape, in part, that transatlantic and humiliating reproach, of being obliged to apply to Europe for an account and description of the productions of our own country.

Nevertheless, the well-earned meed of praise must not, cannot be withheld, from those worthy and indefatigable naturalists, who, impelled by an ardent love of science, became voluntary exiles from home and all its sweets, and subjected themselves to years of labour and peril, in personal efforts to examine and illustrate the natural history of this extensive Western empire. The "Insects of Georgia," by J. Abbot, published in London, in two volumes, folio; the "Oaks of North America," by Michaux, published in Paris; and the "History of the Forest Trees of North America," by F^s. André-Michaux, son to the preceding, now publishing in Paris, and about to be republished in this city by Messrs. Bradford & Inskeep, are works of the first character in point of correct scientific description and splendid colored representations of their respective subjects. Such examples

particularly that of the latter, where elegance and utility are blended with the observations of a judicious and discriminating naturalist, cannot fail of being highly acceptable to the friends of science in every part of the world, and of animating our native citizens to similar exertions in exploring and illustrating the various other departments of the natural history of their country. Well authenticated facts deduced from careful observation, precise descriptions, and faithfully pourtrayed representations drawn from living nature, are the only true and substantial materials with which we can ever hope to erect and complete the great superstructure of science;—without these all the learned speculations of mere closet theory are but "the baseless fabricks of a vision."

For the direction of those who may be disposed to honor the author with their correspondence, the following list is subjoined; containing the common popular names of the *most interesting* of our LAND BIRDS, whose history we have yet to detail, and of whose manners any authentic particulars will be gladly received.

VULTURES.

*King Vulture.—Upper parts a reddish buff color; lower yellowish white; an elegant specimen; sometimes seen in E. Florida.

*Black Vulture, or Carrion Crow.—Common to the southern states, and differing from the following.

Turkey Buzzard.—Not confined to the southern, but found also in the middle, and occasionally in the northern states.

EAGLES AND HAWKS.

Bald Eagle.—Or more properly the White-headed Eagle.

*Sea Eagle.—Three feet six inches long; color a rusty brown;

tail deep brown; bill blue; feeds on fish, which he takes without the assistance of others.

*White-tailed Eagle.—A bold and ferocious species; tips of the tail feathers brown. Inhabits the northern states.

*Ash-colored Hawk.—Above a brownish ash; legs bluish ash, half covered with feathers; tail cinereous banded with white; also a native of the North.

Fish Hawk.—A general inhabitant during summer of our whole Atlantic coast.

Barred-breasted Hawk.—Twenty inches long; above deep brown; breast rufous, barred with white.

*Swallow-tailed Hawk.—Body blackish; head and whole lower parts pure white: a most elegant species; inhabits the southern and western states during summer; is often seen in the vicinity of the Mississippi, between the towns of Natchez and Baton Rouge. Tail very long, and remarkably forked.

Newfoundland Hawk.—Thighs ash-colored; legs half feathered; length twenty inches.

Northern Hawk.—Above a lead color; below barred with white; eye reddish; length eighteen inches: a rare species.

Marsh Hawk.—Sides of the head and throat marked with a circlet of white; through the eye a stripe of black. Length two feet.

Speckled Hawk

Great Hen Hawk

Chicken Hawk

Red-tailed Hawk

OWLS.—Eared.

Great Virginian Owl.—Noted for its loud whooping.

Red or Common Screech Owl.

Short-eared Owl.

With smooth Heads.

Snow Owl.—The largest of his tribe; white, spotted with small brown spots.

Barred, or Grey Owl.

Cinereous Owl.

White Owl.—Fourteen inches long; color above a pale brownish yellow.

Tawny Owl.—Tawny red, powdered with black.

*Canada Owl.—Head above black, spotted with white dots; breast rufous, with whitish bars and some black; sixteen inches long. Inhabits the northern states.

*Hawk Owl.—A singular species much resembling a hawk in appearance; hunts during day.

Acadian Owl.—Above chocolate; tail spotted with white; length seven inches. Fond of frequenting the sea shore.

SHRIKES, OR BUTCHER BIRDS.

*Crested, or Canada Shrike.—Head rufous; length six inches.

*Black-capped Shrike.—Inhabits Florida, sometimes found in Georgia.

CROWS.

Raven.

Common Crow.

Long-winged Crow.—A new species. Inhabits the southern and western states.

Magpie.—Inhabits Upper Louisiana.

*Florida Jay.—Something smaller than our common Blue Jay.

Inhabits East Florida. Not crested.

ORIOLES.

Red-winged Oriole, or Marsh Blackbird.

Louisiana Oriole.—Variegated with black and white.

Yellow-throated Oriole.—Green; cheeks and chin yellow. Nine inches long.

GRAKLE.

*Boat-tailed Grakle, or Jackdaw of the southern states.

CUCKOOS.

Yellow-billed Cuckoo.

Black-billed Cuckoo.—A new species.

WOODPECKERS.

Ivory-billed Woodpecker.

Pileated Woodpecker.—Called by some the Woodcock.

*Red-vented Woodpecker.—Inhabits the northern districts.

GROUS AND PARTRIDGE.

Pennsylvania Partridge, or Quail.

Ruffed Grous, or New England Partridge.

*Spotted Grous.

PIGEONS.

Passenger, or common Wild Pigeon; a very interesting species.

Turtle Dove.

*Ground Dove.—Abundant among the sea islands of Georgia.

GROSBEAKS.

Common Cross-bill Inhabit the pine woods of the north-White-winged Cross-bill ern states.

Yellow-bellied Grosbeak
Blue Grey Grosbeak
Inhabit Virginia.

Dusky Grosbeak

Hudson Bay Grosbeak

Canada Grosbeak

Inhabit the northern states.

BUNTINGS.

White-crowned Bunting.

Blue Bunting.—Both of these inhabit the northern states.

Louisiana Bunting.—Rufous, spotted with black; tail black; length five inches.

FINCHES.

Lesser Red-poll.—Visits the Gennesee country in winter in flocks; has a spot of dark crimson on the crown; called by some the Snow-bird.

Black-faced Finch.—Red brown; throat and rump scarlet; band on the breast black.

FLYCATCHERS.

*Forked-tail Flycatcher.—Length fourteen inches; tail long; inhabits Canada.

Rusty Flycatcher.—Wings and tail black; plumage above brown; inhabits the southern states.

WARBLERS.

Of these little summer visitants there are probably a consivol. III. derable number that have not yet come to our knowledge. These have slender bills; and feed for the most part on the larvæ of insects, which they glean from the leaves.

SWALLOWS.

Common, or Purple Martin.

White-bellied Swallow.—Above steel blue glossed with green.

Red-bellied, or Barn Swallow.

Chimney Swallow.

Bank Swallow.

GOATSUCKERS.

Night Hawk, or Great Bat of Virginia.

*Chuck-wills-widow.—Inhabits the southern and western states.
Whip-poor-will.

Those to whose names an asterisk is prefixed being rare birds in Pennsylvania, well preserved skins of them would be received as a very particular favour.

Philadelphia, Feb. 12th, 1811.

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AMERICAN ORNITHOLOGY.

MOTTLED OWL.

STRIX NÆVIA.

[Plate XIX.—Fig. 1.]

Arct. Zool. 231. No. 118.—LATHAM, I. 126.—TURTON, I. 167.—PEALE'S Museum, No. 444.

ON contemplating the grave and antiquated figure of this night wanderer, so destitute of every thing like gracefulness of shape, I can scarcely refrain from smiling at the conceit, of the ludicrous appearance this bird must have made, had nature bestowed on it the powers of song, and given it the faculty of warbling out sprightly airs while robed in such a solemn exterior. But the great God of Nature hath, in his wisdom, assigned to this class of birds a more unsocial, and less noble, tho, perhaps, not less useful, disposition, by assimilating them, not only in form of countenance, but in voice, manners, and appetite, to some particular beasts of prey; secluding them from the enjoyment of the gay sunshine of day, and giving them little more than the few solitary hours of morning and evening twilight to procure their food and pursue their amours; while all the tuneful tribes, a few excepted. are wrapt in silence and repose. That their true character, however, should not be concealed from those weaker animals on whom they feed (for heaven abhors deceit and hypocrisy), He has stamped their countenance with strong traits of their murderer the Cat; and birds in this respect are, perhaps, better physiognomists than men.

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The Owl now before us is chiefly a native of the northern regions, arriving here, with several others, about the commencement of cold weather; frequenting the uplands and mountainous districts, in preference to the lower parts of the country; and feeding on mice, small birds, beetles, and crickets. It is rather a scarce species in Pennsylvania; flies usually in the early part of night and morning; and is sometimes observed sitting on the fences during day, when it is easily caught; its vision at that time being very imperfect.

The bird represented in the plate was taken in this situation, and presented to me by a friend. I kept it in the room beside me for some time; during which its usual position was such as I have given it. Its eyelids were either half shut, or slowly and alternately opening and shutting, as if suffering from the glare of day; but no sooner was the sun set, than its whole appearance became lively and animated; its full and globular eyes shone like those of a cat; and it often lowered its head, in the manner of a cock when preparing to fight, moving it from side to side, and also vertically, as if reconnoitring you with great sharpness. In flying through the room it shifted from place to place with the silence of a spirit (if I may be allowed the expression), the plumage of its wings being so extremely fine and soft as to occasion little or no friction with the air: a wise provision of nature, bestowed on the whole genus, to enable them, without giving alarm, to seize their prey in the night. For an hour or two in the evening, and about break of day, it flew about with great activity. When angry, it snapped its bill repeatedly with violence, and so loud as to be heard in the adjoining room, swelling out its eyes to their full dimensions, and lowering its head as before described. It swallowed its food hastily, in large mouthfuls; and never was observed to drink. Of the eggs and nest of this species I am unable to speak.

The mottled owl is ten inches long and twenty-two in extent; the upper part of the head, the back, ears and lesser wing-coverts,

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are dark brown, streaked and variegated with black, pale brown, and ash; wings lighter, the greater coverts and primaries spotted with white; tail short, even, and mottled with black, pale brown, and whitish, on a dark brown ground; its lower side grey; horns (as they are usually called) very prominent, each composed of ten feathers, increasing in length from the front backwards, and lightest on the inside; face whitish, marked with small touches of dusky, and bounded on each side with a circlet of black; breast and belly white, beautifully variegated with ragged streaks of black, and small transverse touches of brown; legs feathered nearly to the claws, with a kind of hairy down, of a pale brown color; vent and under tail-coverts white, the latter slightly marked with brown; iris of the eye a brilliant golden yellow; bill and claws bluish horn color.

This was a female. The male is considerably less in size; the general colors darker; and the white on the wing-coverts not so observable.

Hollow trees, either in the woods or orchard, or close evergreens in retired situations, are the usual roosting places of this and most of our other species. These retreats, however, are frequently discovered by the Nuthatch, Titmouse, or Blue Jay, who instantly raise the alarm; a promiscuous group of feathered neighbours soon collect round the spot, like crowds in the streets of a large city when a thief or murderer is detected; and by their insults and vociferation oblige the recluse to seek for another lodging elsewhere. This may account for the circumstance of sometimes finding them abroad during the day, on fences and other exposed situations.

MEADOW LARK.

ALAUDA MAGNA.

[Plate XIX.—Fig. 2.]

LINN. Syst. 289.—Crescent Stare, Arct. Zool. 330. No. 192.—LATHAM III. 6. Var. A.—Le Fer-à-cheval, ou Merle à Collier d'Amerique, Buff. III. p. 371.—Catesb. Car. 1. pl. 33.—Bartram, p. 290.—Peale's Museum, No. 5212.

THO this well-known species cannot boast of the powers of song which distinguish that "harbinger of day" the Sky Lark of Europe, yet in richness of plumage, as well as in sweetness of voice (as far as his few notes extend), he stands eminently its superior. He differs from the greater part of his tribe in wanting the long straight hind claw, which is probably the reason why he has been classed, by some late naturalists, with the Starlings. But in the particular form of his bill, in his manners, plumage, mode and place of building his nest, nature has clearly pointed out his proper family.

This species has a very extensive range; having myself found them in Upper Canada, and in each of the states from New Hampshire to New Orleans. Mr. Bartram also informs me that they are equally abundant in East Florida. Their favorite places of retreat are pasture fields and meadows, particularly the latter, which have conferred on them their specific name; and no doubt supplies them abundantly with the particular seeds and insects on which they feed. They are rarely or never seen in the depth of the woods; unless where, instead of underwood, the ground is covered with rich grass, as in the Chactaw and Chickasaw countries, where I met with them in considerable numbers in the months of May and June. The extensive and luxuriant prairies between Vincennes and St. Louis also abound with them.

It is probable that in the more rigorous regions of the north they may be birds of passage, as they are partially so here; tho I have seen them among the meadows of New-Jersey, and those that border the rivers Delaware and Schuylkill, in all seasons; even when the ground was deeply covered with snow. There is scarcely a market day in Philadelphia from September to March, but they may be found in market. They are generally considered, for size and delicacy, little inferior to the quail, or what is here usually called the partridge, and valued accordingly. I once met with a few of these birds in the month of February, during a deep snow, among the heights of the Alleghany between Shippensburgh and Sommerset, gleaning on the road, in company with the small snow-birds. In the state of South Carolina and Georgia, at the same season of the year, they swarm among the rice plantations, running about the yards and out-houses, accompanied by the Killdeers, with little appearance of fear, as if quite domesticated.

These birds, after the building season is over, collect in flocks; but seldom fly in a close compact body; their flight is something in the manner of the grous and partridge, laborious and steady; sailing, and renewing the rapid action of the wings alternately. When they alight on trees or bushes, it is generally on the tops of the highest branches, whence they send forth a long, clear, and somewhat melancholy note, that in sweetness and tenderness of expression is not surpassed by any of our numerous warblers. This is sometimes followed by a kind of low, rapid chattering, the particular call of the female; and again the clear and plaintive strain is repeated as before. They afford tolerable good amusement to the sportsman, being most easily shot while on wing; as they frequently squat among the long grass, and spring within gunshot. The nest of this species is built generally in, or below, a thick tuft or tussock of grass; it is composed of dry grass, and fine bent laid at bottom, and wound all around, leaving an arched entrance level with the ground; the inside is lined with fine stalks of the

same materials, disposed with great regularity. The eggs are four, sometimes five, white, marked with specks and several large blotches of reddish brown, chiefly at the thick end. Their food consists of caterpillars, grub worms, beetles, and grass seeds; with a considerable proportion of gravel. Their general name is the *Meadow Lark*; among the Virginians they are usually called the *Old field Lark*.

The length of this bird is ten inches and a half, extent sixteen and a half; throat, breast, belly, and line from the eye to the nostrils, rich yellow; inside lining and edge of the wing the same; an oblong crescent of deep velvetty black ornaments the lower part of the throat; lesser wing-coverts black, broadly bordered with pale ash; rest of the wing feathers light brown handsomely serrated with black; a line of yellowish white divides the crown, bounded on each side by a stripe of black intermixed with bay, and another line of yellowish white passes over each eye backwards; cheeks blueish white, back and rest of the upper parts beautifully variegated with black, bright bay, and pale ochre; tail wedged, the feathers neatly pointed, the four outer ones on each side, nearly all white; sides, thighs, and vent pale yellow ochre, streaked with black; upper mandible brown, lower blueish white; eyelids furnished with strong black hairs; legs and feet very large, and of a pale flesh color.

The female has the black crescent more skirted with grey, and not of so deep a black. In the rest of her markings the plumage differs little from that of the male. I must here take notice of a mistake committed by Mr. Edwards in his History of Birds, Vol. VI, p. 123, where, on the authority of a bird dealer of London, he describes the Calandre Lark (a native of Italy and Russia) as belonging also to N. America, and having been brought from Carolina. I can say with confidence, that in all my excursions thro that and the rest of the Southern states, I never met such a bird, nor any person who had ever seen it. I have no hesitation in believing that the Calandre is not a native of the United States.

BLACK AND WHITE CREEPER.

CERTHIA MACULATA.

[Plate XIX.—Fig. 3.]

Edwards, pl. 300.—White poll Warbler, Arct. Zool. 402. No. 293.—Le Figuier variè, Buff. V. 305.—Lath. II. 488.—Turton, I. p. 603.—Peale's Museum, No. 7092.

THIS nimble and expert little species seldom perches on the small twigs; but circumambulates the trunk, and larger branches, in quest of ants and other insects, with admirable dexterity. It arrives in Pennsylvania, from the south, about the twentieth of April, the young begin to fly early in July; and the whole tribe abandon the country about the beginning of October. Sloane describes this bird as an inhabitant of the West India islands, where it probably winters. It was first figured by Edwards from a dried skin sent him by Mr. William Bartram, who gave it its present name. Succeeding naturalists have classed it with the warblers; a mistake which I have endeavoured to rectify.

The genus of Creepers comprehends about thirty different species, many of which are richly adorned with gorgeous plumage; but, like their congenial tribe the Woodpeckers, few of them excel in song; their tongues seem better calculated for extracting noxious insects from the bark of trees, than for trilling out sprightly airs; as the hardened hands of the husbandman are better suited for clearing the forest or guiding the plough, than dancing among the keys of a forte-piano. Which of the two is the most honorable and useful employment is not difficult to determine. Let the farmer, therefore, respect this little bird for its useful qualities, in clearing his fruit and forest trees from destructive insects; tho it cannot serenade him with its song.

The length of this species is five inches and a half, extent seven and a half; crown white, bordered on each side with a band of black, which is again bounded by a line of white passing over each eye, below this is a large spot of black covering the ear feathers; chin and throat black; wings the same, crossed transversely by two bars of white; breast and back streaked with black and white; tail, upper and also under coverts, black, edged and bordered with white; belly white; legs and feet dirty yellow; hind claw the longest, and all very sharp-pointed; bill a little compressed sideways, slightly curved, black above, paler below; tongue long, fine-pointed, and horny at the extremity. These last circumstances, joined to its manners, characterize it, decisively, as a Creeper.

The female and young birds of the first year want the black on the throat, having that part of a greyish white.

PINE-CREEPING WARBLER.

SYLVIA PINUS.

[Plate XIX.—Fig. 4.]

Pine-Creeper, CATESBY, I. 61.—PEALE'S Museum, No. 7312.

THIS species inhabits the pine woods of the Southern states, where it is resident, and where I first observed it, running along the bark of the pines; sometimes alighting and feeding on the ground, and almost always when disturbed flying up and clinging to the trunks of the trees. As I advanced towards the south it became more numerous. Its note is a simple reiterated *chirrup*, continued for four or five seconds.

Catesby first figured and described this bird; but so imperfectly as to produce among succeeding writers great confusion, and many mistakes as to what particular bird was intended. Edwards has supposed it to be the blue-winged Yellow Warbler; Latham has supposed another species to be meant; and the worthy Mr. Pennant has been led into the same mistakes; describing the male of one species, and the female of another, as the male and female Pine-Creeper. Having shot and examined great numbers of these birds I am enabled to clear up these difficulties by the following descriptions, which will be found to be correct.

The Pine-creeping Warbler is five and a half inches long, and nine inches in extent; the whole upper parts are of a rich green olive, with a considerable tinge of yellow; throat, sides, and breast yellow; wings and tail brown with a slight cast of bluish, the former marked with two bars of white, slightly tinged with yellow; tail forked, and edged with ash; the three exterior feathers marked near the tip with a broad spot of white; middle of the belly and

vent feathers white. The female is brown, tinged with olive green on the back; breast dirty white, or slightly yellowish. The bill in both is truly that of a Warbler; and the tongue slender as in the Motacilla genus, notwithstanding the habits of the bird.

The food of these birds is the seeds of the pitch pine, and various kinds of bugs. The nest, according to Mr. Abbot, is suspended from the horizontal fork of a branch, and formed outwardly of slips of grape-vine bark, rotten wood, and caterpillars webs, with sometimes pieces of hornets nests interwoven; and is lined with dry pine leaves, and fine roots of plants. The eggs are four, white, with a few dark brown spots at the great end.

These birds, associating in flocks of 20 or 30 individuals, are found in the depth of the pine Barrens; and are easily known by their manner of rising from the ground and alighting on the *body* of the tree. They also often glean among the topmost boughs of the pine trees, hanging, head downwards like the titmouse.





LOUISIANA TANAGER.

TANAGRA LUDOVICIANA.

[Plate XX.—Fig. 1.]

PEALE's Museum, No. 6236.

THIS bird, and the two others that occupy the same plate, were discovered, in the remote regions of Louisiana, by an exploring party under the command of Captain George Merriwether Lewis, and Lieutenant, now General, William Clark, in their memorable expedition across the continent to the Pacific Ocean. They are entitled to a distinguished place in the pages of American Ornithology, both as being, till now, altogether unknown to Naturalists, and as natives of what is, or at least will be, and that at no distant period, part of the western territory of the United States.

The frail remains of the bird now under consideration, as well as of the other two, have been set up by Mr. Peale, in his Museum, with as much neatness as the state of the skins would permit. Of three of these, which were put into my hands for examination, the most perfect was selected for the drawing. Its size and markings were as follow. Length six inches and a half; back, tail, and wings black; the greater wing-coverts tipt with yellow, the next superior row wholly yellow; neck, rump, tail-coverts and whole lower parts greenish yellow; forepart of the head to and beyond the eyes, light scarlet; bill yellowish horn color; edges of the upper mandible ragged, as in the rest of its tribe; legs light blue; tail slightly forked, and edged with dull whitish: the whole figure about the size, and much resembling in shape, the the Scarlet Tanager (Plate 11. fig. 3.); but evidently a different species, from the

black back, and yellow coverts. Some of the feathers on the upper part of the back were also skirted with yellow. A skin of what I supposed to be the female, or a young bird, differed in having the wings and back brownish; and in being rather less.

The family, or genus, to which this bird belongs, is particularly subject to changes of color, both progressively, during the first and second seasons; and also periodically, afterwards. Some of those that inhabit Pennsylvania change from an olive green to a greenish yellow; and, lastly, to a brilliant scarlet; and I confess when the preserved specimen of the present species was first shewn me, I suspected it to have been passing thro a similar change at the time it was taken. But having examined two more skins of the same species, and finding them all marked very nearly alike, which is seldom the case with those birds that change while moulting, I began to think that this might be its most permanent, or at least its summer or winter dress.

The little information I have been able to procure of the species generally, or at what particular season these were shot, prevents me from being able to determine this matter to my wish.

I can only learn, that they inhabit the extensive plains or prairies of the Missouri, between the Osage and Mandan nations; building their nests in low bushes, and often among the grass. With us the Tanagers usually build on the branches of a hickory or white oak sapling. These birds delight in various kinds of berries with which those rich prairies are said to abound.

CLARK'S CROW.

CORVUS COLUMBIANUS.

[Plate XX.—Fig. 2.]

PEALE'S Museum, No. 1371.

THIS species resembles, a little, the Jackdaw of Europe (Corvus Monedula); but is remarkable for its formidable claws, which approach to those of the Falco genus; and would seem to intimate that its food consists of living animals, for whose destruction these weapons must be necessary. In conversation with different individuals of the party, I understood that this bird inhabits the shores of the Columbia, and the adjacent country, in great numbers, frequenting the rivers and sea shore, probably feeding on fish; and that it has all the gregarious and noisy habits of the European species, several of the party supposing it to be the same.

The figure in the plate was drawn with particular care, after a minute examination and measurement of the only preserved skin that was saved; and which is now deposited in Mr. Peale's Museum.

This bird measures thirteen inches in length; the wings, the two middle tail feathers, and the interior vanes of the next (except at the tip) are black, glossed with steel blue; all the secondaries, except the three next the body, are white for an inch at their extremities, forming a large spot of white on that part, when the wing is shut; the tail is rounded; yet the two middle feathers are somewhat shorter than those adjoining; all the rest are pure white, except as already described; the general color of the head, neck, and body above and below, is a light silky drab, darkening almost to a dove color on the breast and belly; vent white; claws black,

large, and hooked, particularly the middle and hind claw; legs also black; bill a dark horn color; iris of the eye unknown.

In the state of Georgia, and several parts of West Florida, I discovered a crow, not hitherto taken notice of by Naturalists, rather larger than the present species; but much resembling it in the form and length of its wings, in its tail, and particularly its claws. This bird is a constant attendant along the borders of streams and stagnating ponds, feeding on small fish and lizards, which I have many times seen him seize as he swept along the surface. A well preserved specimen of this bird was presented to Mr. Peale, and is now in his Museum. It it highly probable that with these external resemblances the habits of both may be nearly alike.

LEWIS'S WOODPECKER.

PICUS TORQUATUS.

[Plate XX.—Fig. 3.]

PEALE'S Museum, No. 2020.

OF this very beautiful and singularly marked species I am unable to give any farther account than as relates to its external appearance. Several skins of this species were preserved; all of which I examined with care; and found little or no difference among them, either in the tints or disposition of the colors.

The length of this was eleven inches and a half; the back, wings, and tail were black, with a strong gloss of green; upper part of the head the same; front, chin, and cheeks, beyond the eyes, a dark rich red; round the neck passes a broad collar of white, which spreads over the breast, and looks as if the fibres of the feathers had been silvered; these feathers are also of a particular structure, the fibres being separate, and of a hair-like texture; belly deep vermilion, and of the same strong hair-like feathers, intermixed with silvery ones; vent black; legs and feet dusky, inclining to greenish blue; bill dark horn color.

For a more particular, and doubtless a more correct account of this and the two preceding species, the reader is referred to General Clark's History of the Expedition, now preparing for the press. The three birds I have here introduced are but a small part of the valuable collection of new subjects in Natural history, discovered, and preserved, amidst a thousand dangers and difficulties, by those two enterprising travellers, whose intrepidity was only equalled by their discretion, and by their active and laborious pursuit of whatever might tend to render their journey useful

to Science and to their country. It was the request and particular wish of Captain Lewis, made to me in person, that I should make drawings of such of the feathered tribes as had been preserved, and were new. That brave soldier, that amiable and excellent man, over whose solitary grave in the wilderness I have since shed tears of affliction, having been cut off in the prime of his life, I hope I shall be pardoned for consecrating this humble note to his memory, until a more able pen shall do better justice to the subject.





CANADA JAY.

CORVUS CANADENSIS.

Plate XXI.—Fig. 1.

LINN. Syst. 158.—Cinereous Crow, Arct. Zool. p. 248. No. 137.—LATHAM, I. 389.—Le Geay Brun de Canada, Brisson, II. 54.—Buffon, III. 117.

WERE I to adopt the theoretical reasoning of a celebrated French naturalist, I might pronounce this bird to be, a debased descendant from the common Blue Jay of the United States, degenerated by the influence of the bleak and chilling regions of Canada; or perhaps a *spurious* production, between the Blue Jay and the Cat-bird: or what would be more congenial to the Count's ideas, trace its degradation to the circumstance of migrating, some thousand years ago, from the genial shores of Europe, where nothing like degeneracy or degradation ever takes place among any of God's creatures. I shall, however, on the present occasion, content myself with stating a few particulars better supported by facts, and more consonant to the plain homespun of common sense.

This species inhabits the country extending from Hudson's Bay, and probably farther north, to the river St. Lawrence; also in winter the inland parts of the District of Maine, and northern tracts of the states of Vermont and New York. When the season is very severe, with deep snow, they sometimes advance farther south; but generally return northward as the weather becomes more mild.

The character given of this bird by the people of those parts of the country where it inhabits, is, that it feeds on black moss, worms, and even flesh;—when near habitations or tents pilfers every thing it can come at—is bold, and comes even into the tent to eat meat out of the dishes:—watches the hunters while baiting their traps for martens, and devours the bait as soon as their backs are turned; that they breed early in spring, building their nests on pine trees, forming them of sticks and grass, and lay blue eggs; that they have two, rarely three young at a time, which are at first quite black, and continue so for some time; that they fly in pairs; lay up hoards of berries in hollow trees; are seldom seen in January unless near houses; are a kind of Mock-bird; and when caught pine away, tho their appetite never fails them; notwithstanding all which ingenuity and good qualities, they are, as we are informed, detested by the natives.*

The only individuals of this species that I ever met with in the United States were on the shores of the Mohawk, a short way above the Little Falls. It was about the last of November, and the ground deeply covered with snow. There were three or four in company, or within a small distance of each other, flitting leisurely along the road side, keeping up a kind of low chattering with one another, and seemed no ways apprehensive at my approach. I soon secured the whole; from the best of which the drawing in the plate was carefully made. On dissection I found their stomachs occupied by a few spiders and the aureliæ of some insects. I could perceive no difference between the plumage of the male and female.

The Canada Jay is eleven inches long, and fifteen in extent; back, wings, and tail, a dull leaden grey, the latter long, cuneiform, and tipt with dirty white; interior vanes of the wings brown, and also partly tipt with white; plumage of the head loose and prominent; the forehead and feathers covering the nostril, as well as the whole lower parts a dirty brownish white, which also passes round the bottom of the neck like a collar; part of the crown and

^{*} HEARNE's Journey, p. 405.

hind head black; bill and legs also black; eye dark hazel. The whole plumage on the back is long, loose, unwebbed, and in great abundance, as if to protect it from the rigors of the regions it inhabits.

A gentleman of observation, who resided for many years near the North river, not far from Hudson, in the state of New York, informs me, that he has particularly observed this bird to arrive there at the commencement of cold weather—he has often remarked its solitary habits; it seemed to seek the most unfrequented shaded retreats, keeping almost constantly on the ground, yet would sometimes, towards evening, mount to the top of a small tree, and repeat its notes (which a little resemble those of the Baltimore) for a quarter of an hour together; and this it generally did immediately before snow, or falling weather.

SNOW BUNTING.

EMBERIZA NIVALIS.

[Plate XXI.—Fig. 2.]

LINN. Syst. 308.—Arct. Zool. p. 355. No. 222.—Tawny Bunting, Br. Zool. No. 121.— L'Ortolan de Neige, Buffon, IV. 329. Pl. Enl. 497.—Peale's Museum, 5900.

THIS being one of those birds common to both continents, its migrations extending almost from the very pole, to a distance of forty or fifty degrees around; and its manners and peculiarities having been long familiarly known to the naturalists of Europe, I shall in this place avail myself of the most interesting parts of their accounts; subjoining such particulars as have fallen under my own observation.

"These birds," says Mr. Pennant, "inhabit not only Green"land* but even the dreadful climate of Spitzbergen, where ve"getation is nearly extinct, and scarcely any but cryptogamious
"plants are found. It therefore excites wonder, how birds, which
"are graminivorous in every other than those frost-bound regions,
"subsist: yet are there found in great flocks both on the land and
"ice of Spitzbergen.† They annually pass to this country by way
"of Norway; for in the spring, flocks innumerable appear, espe"cially on the Norwegian isles: continue only three weeks, and
"then at once disappear.‡ As they do not breed in Hudson's Bay
"it is certain that many retreat to this last of lands, and totally
"uninhabited, to perform in full security the duties of love, incu"bation, and nutrition. That they breed in Spitzbergen is very

^{*} CRANTZ, I. 77. † Lord Mulgrave's Voyage, 188. Martin's Voyage, 73. ‡ Leems, 256.

"probable; but we are assured that they do so in Greenland.
"They arrive there in April, and make their nests in the fissures
"of the rocks, on the mountains, in May; the outside of their nest
"is grass, the middle of feathers; and the lining the down of the
"Arctic fox. They lay five eggs, white spotted with brown: they
"sing finely near their nest.

"They are caught by the boys in autumn when they collect "near the shores in great flocks, in order to migrate; and are "eaten dried.*

"In Europe they inhabit during summer the most naked Lap"land Alps; and descend in rigorous seasons into Sweden, and fill
"the roads and fields; on which account the Dalecarlians call them
"illwarsfogel, or bad-weather birds. The Uplanders hardwarsfogel,
"expressive of the same. The Laplanders style them Alaipg.
"Leems† remarks, I know not with what foundation, that they
"fatten on the flowing of the tides in Finmark; and grow lean on
"the ebb. The Laplanders take them in great numbers in hair"springs for the tables, their flesh being very delicate.

"They seem to make the countries within the whole Arctic "circle their summer residence, from whence they overflow the "more southern countries in amazing multitudes, at the setting in "of winter in the frigid zone. In the winter of 1778-9 they came "in such multitudes into *Birsa*, one of the Orkney islands, as to "cover the whole barony; yet of all the numbers hardly two "agreed in colors.

"Lapland, and perhaps Iceland, furnishes the north of Bri"tain with the swarms that frequent these parts during winter, as
"low as the Cheviot Hills in lat. 52° 32'. Their resting places the
"Feroe isles, Schetland and the Orkneys. The highlands of Scot"land, in particular, abound with them. Their flights are im"mense, and they mingle so closely together in form of a ball

⁺ Finmark, 255.

"that the fowlers make great havock among them. They arrive "lean, soon become very fat, and are delicious food. They either "arrive in the highlands very early, or a few breed there, for I "had one shot for me at Invercauld, the fourth of August. But "there is a certainty of their migration; for multitudes of them "fall, wearied with their passage, on the vessels that are sailing "through the Pentland frith.*

"In their summer dress they are sometimes seen in the south "of England;† the climate not having severity sufficient to affect "the colors; yet now and then a milk white one appears, which "is usually mistaken for a white Lark.

These birds appear in the northern districts of the United States early in December, or with the first heavy snow, particularly if drifted by high winds. They are usually called the White Snow-bird, to distinguish them from the small dark bluish Snow-bird already described. Their numbers increase with the increasing severity of weather, and depth of snow. Flocks of them sometimes reach as far south as the borders of Maryland; and the whiteness of their plumage is observed to be greatest towards the depth of winter. They spread over the Gennesee country and the interior of the district of Maine, flying in close compact bodies, driving about most in a high wind; sometimes alighting near the doors, but seldom sitting long, being a roving restless bird. In these

^{*} Bishop Pocock's Journal, MS.

[‡] Bell's Travels, I, 198.

[†] Morton's Northamp. p. 427.

[§] KRAMER, Anim. Austr. 372.

plentiful regions, where more valuable game is abundant, they hold out no temptation to the sportsman or hunter; and except the few caught by boys in snares, no other attention is paid to them. They are, however, universally considered as the harbingers of severe cold weather. How far westward they extend I am unable to say. One of the most intelligent and expert hunters who accompanied captains Lewis and Clark on their expedition to the Pacific Ocean, informs me, that he has no recollection of seeing these birds in any part of their tour, not even among the bleak and snowy regions of the Stony mountains; tho the little blue one was in abundance.

The Snow Bunting derives a considerable part of its food from the seeds of certain aquatic plants, which may be one reason for its preferring these remote northern countries, so generally intersected with streams, ponds, lakes and shallow arms of the sea, that probably abound with such plants. In passing down the Seneca river towards lake Ontario, late in the month of October, I was surprised by the appearance of a large flock of these birds feeding on the surface of the water, supported on the tops of a growth of weeds that rose from the bottom, growing so close together that our boat could with great difficulty make its way through them. They were running about with great activity; and those I shot and examined were filled, not only with the seeds of this plant, but with a minute kind of shell fish that adheres to the leaves. In these kind of aquatic excursions they are doubtless greatly assisted by the length of their hind heel and claws. I also observed a few on Table rock, above the falls of Niagara, seemingly in search of the same kind of food.

According to the statements of those traders who have resided near Hudson's bay, the Snow Buntings are the earliest of their migratory birds, appearing there about the eleventh of April, staying about a month or five weeks, and proceeding farther north to breed. They return again in September; stay till November, when the severe frosts drive them southward.*

^{*} Lond. Phil. Trans. LXII, 403.

The summer dress of the Snow Bunting is a tawny brown, interspersed with white, covering the head, neck and lower parts; the back is black, each feather being skirted with brown; wings and tail also black, marked in the following manner:—the three secondaries next the body are bordered with bay, the next with white, and all the rest of the secondaries, as well as their coverts, and shoulder of the wing, pure white; the first six primaries are black from their coverts downwards to their extremities; tail forked, the three exterior feathers, on each side, white, marked on the outer edge, near the tip, with black; the rest nearly all black; tail coverts reddish brown, fading into white; bill pale brown; legs and feet black; hind claw long like that of the Lark, tho more curved. In winter they become white on the head, neck, and whole under side, as well as great part of the wings and rump; the back continues black skirted with brown. Some are even found pure white. Indeed so much does their plumage vary according to age and season, that no two are found at any time alike.

RUSTY GRAKLE.

GRACULA FERRUGINEA.

[Plate XXI.—Fig. 3.]

Black Oriole, Arct. Zool. p. 259. No. 144.—Rusty Oriole, Ibid. p. 260, No. 146.—New York Thrush, Ibid. p. 339. No. 205.—Hudsonian Thrush, Ibid. No. 234, female.—Labrador Thrush, Ibid. p. 340, No. 206.—Peale's Museum, No. 5514.

HERE is a single species described by one of the most judicious naturalists of Great Britain no less than five different times! The greater part of these descriptions is copied by succeeding naturalists, whose synonyms it is unnecessary to repeat. So great is the uncertainty in judging, from a mere examination of their dried or stuffed skins, of the particular tribes of birds, many of which, for several years, are constantly varying in the colors of their plumage, and at different seasons, or different ages, assuming new and very different appearances. Even the size is by no means a safe criterion, the difference in this respect between the male and female of the same species (as in the one now before us) being sometimes very considerable.

This bird arrives in Pennsylvania, from the north, early in October; associates with the Red-wings, and Cow-pen Buntings, frequents corn fields, and places where grasshoppers are plenty; but Indian corn, at that season, seems to be its principal food. It is a very silent bird, having only now and then a single note, or chuck. We see them occasionally until about the middle of November, when they move off to the south. On the twelfth of January I overtook great numbers of these birds in the woods near Petersburgh, Virginia, and continued to see occasional parties of them almost every day as I advanced southerly, particularly in South

Carolina, around the rice plantations, where they were numerous, feeding about the hog pens, and wherever Indian corn was to be procured. They also extend to a considerable distance westward. On the fifth of March, being on the banks of the Ohio, a few miles below the mouth of the Kentucky river, in the midst of a heavy snow storm, a flock of these birds alighted near the door of the cabin where I had taken shelter, several of which I shot, and found their stomachs, as usual, crammed with Indian corn. Early in April they pass hastily through Pennsylvania, on their return to the north to breed.

From the accounts of persons who have resided near Hudson's bay, it appears, that these birds arrive there in the beginning of June, as soon as the ground is thawed sufficiently for them to procure their food, which is said to be worms and maggots; sing with a fine note till the time of incubation, when they have only a chucking noise, till the young take their flight; at which time they resume their song. They build their nests in trees, about eight feet from the ground, forming them with moss and grass, and lay five eggs of a dark color, spotted with black. It is added, they gather in great flocks, and retire southerly in September.*

The male of this species, when in perfect plumage, is nine inches in length, and fourteen in extent; at a small distance appears wholly black; but on a near examination is of a glossy dark green; the irides of the eye are silvery, as in those of the Purple Grakle; the bill is black, nearly of the same form with that of the last mentioned species; the lower mandible a little rounded, with the edges turned inward, and the upper one furnished with a sharp bony process on the inside, exactly like that of the purple species. The tongue is slender, and lacerated at the tip; legs and feet black and strong, the hind claw the largest; the tail is slightly rounded. This is the color of the male when of full age; but three-fourths of these birds which we meet with, have the whole plumage of the

breast, head, neck, and back, tinctured with brown; every feather being skirted with ferruginous; over the eye is a light line of pale brown, below that one of black passing through the eye. This brownness gradually goes off towards spring, for almost all those I shot in the southern states were but slightly marked with ferruginous. The female is nearly an inch shorter; head, neck, and breast almost wholly brown; a light line over the eye, lores black; belly and rump ash; upper and under tail coverts skirted with brown; wings black, edged with rust color; tail black, glossed with green; legs, feet and bill as in the male.

These birds might easily be domesticated. Several that I had winged and kept for some time, became in a few days quite familiar, seeming to be very easily reconciled to confinement.

PURPLE GRAKLE.

GRACULA QUISCALA.

[Plate XXI.—Fig. 4.]

Linn. Syst. 165.—La Pie de la Jamaique, Brisson, II, 41.—Buffon, III, 97. Pl. Enl. 538.—Arct. Zool. p. 263. No. 153.—Gracula Purpurea, the lesser Purple Jackdaw, or Crow Blackbird, Bartram, p. 289.—Peale's Museum, No. 1582.

THIS noted depredator is well known to every careful farmer of the northern and middle states. About the twentieth of March the Purple Grakles visit Pennsylvania from the south, fly in loose flocks, frequent swamps and meadows, and follow in the furrows after the plough; their food at this season consisting of worms, grubs, and caterpillars, of which they destroy prodigious numbers, as if to recompence the husbandman before hand for the havock they intend to make among his crops of Indian corn. Towards evening they retire to the nearest cedars and pine trees to roost; making a continual chattering as they fly along. On the tallest of these trees they generally build their nests in company, about the beginning or middle of April; sometimes ten or fifteen nests being on the same tree. One of these nests, taken from a high pine tree, is now before me. It measures full five inches in diameter within, and four in depth; is composed outwardly of mud, mixed with long stalks and roots of a knotty kind of grass, and lined with fine bent and horse hair. The eggs are five, of a bluish olive color, marked with large spots and straggling streaks of black and dark brown, also with others of a fainter tinge. They rarely produce more than one brood in a season.

The trees where these birds build are often at no great distance from the farm house, and overlook the plantations. From

thence they issue, in all directions, and with as much confidence, to make their daily depredations among the surrounding fields, as if the whole were intended for their use alone. Their chief attention, however, is directed to the Indian corn in all its progressive stages. As soon as the infant blade of this grain begins to make its appearance above ground, the Grakles hail the welcome signal with screams of peculiar satisfaction, and without waiting for a formal invitation from the proprietor, descend on the fields and begin to pull up and regale themselves on the seed, scattering the green blades around. While thus eagerly employed, the vengeance of the gun sometimes overtakes them; but these disasters are soon forgotten, and those

'— who live to get away, Return to steal, another day.'

About the beginning of August when the young ears are in their milky state, they are attacked with redoubled eagerness by the Grakles and Red-wings, in formidable and combined bodies. They descend like a blackening, sweeping tempest on the corn, dig off the external covering of twelve or fifteen coats of leaves, as dexterously as if done by the hand of man, and having laid bare the ear leave little behind to the farmer but the cobs, and shrivelled skins that contained their favorite fare. I have seen fields of corn of many acres, where more than one half was thus ruined. Indeed the farmers in the immediate vicinity of the rivers Delaware and Schuylkill, generally allow one-fourth of this crop to the Blackbirds, among whom our Grakle comes in for his full share. During these depredations, the gun is making great havock among their numbers, which has no other effect on the survivors than to send them to another field, or to another part of the same field. This system of plunder and of retaliation continues until November, when towards the middle of that month they begin to sheer off towards the south.

The lower parts of Virginia, North and South Carolina, and Georgia, are the winter residences of these flocks. Here numerous bodies, collecting together from all quarters of the interior and northern districts, and darkening the air with their numbers, sometimes form one congregated multitude of many hundred thousands. A few miles from the banks of the Roanoke, on the twentieth of January, I met with one of those prodigious armies of Grakles. They rose from the surrounding fields with a noise like thunder, and descending on the length of road before me, covered it and the fences completely with black, and when they again rose, and after a few evolutions descended on the skirts of the high timbered woods, at that time destitute of leaves, they produced a most singular and striking effect; the whole trees for a considerable extent, from the top to the lowest branches, seeming as if hung in mourning; their notes and screaming the meanwhile resembling the distant sound of a great cataract, but in more musical cadence, swelling and dying away on the ear, according to the fluctuation of the breeze. In Kentucky, and all along the Mississippi, from its juncture with the Ohio to the Balize, I found numbers of these birds, so that the Purple Grakle may be considered as a very general inhabitant of the territory of the United States.

Every industrious farmer complains of the mischief committed on his corn by the Crow Blackbirds, as they are usually called; tho, were the same means used, as with pigeons, to take them in clap nets, multitudes of them might thus be destroyed; and the products of them in market, in some measure, indemnify him for their depredations. But they are most numerous and most destructive at a time when the various harvests of the husbandman demand all his attention, and all his hands to cut, cure, and take in; and so they escape with a few sweeps made among them by some of the younger boys with the gun; and by the gunners from the neighbouring towns and villages; and return from their winter quarters, sometimes early in March, to renew the like scenes

over again. As some consolation however to the industrious cultivator, I can assure him, that were I placed in his situation, I should hesitate whether to consider these birds most as friends or enemies, as they are particularly destructive to almost all the noxious worms, grubs, and caterpillars that infest his fields, which, were they allowed to multiply unmolested, would soon consume nine-tenths of all the production of his labour, and desolate the country with the miseries of famine! Is not this another striking proof that the Deity has created nothing in vain; and that it is the duty of man, the lord of the creation, to avail himself of their usefulness, and guard against their bad effects as securely as possible, without indulging in the barbarous and even impious wish for their utter extermination.

The Purple Grakle is twelve inches long and eighteen in extent; on a slight view seems wholly black, but placed near, in a good light, the whole head, neck, and breast appear of a rich glossy steel blue, dark violet and silky green; the violet prevails most on the head and breast, and the green on the hind part of the neck. The back, rump, and whole lower parts, the breast excepted, reflect a strong coppery gloss; wing coverts, secondaries, and coverts of the tail, rich light violet, in which the red prevails; the rest of the wings and rounded tail are black, glossed with steel blue. All the above colors are extremely shining, varying as differently exposed to the light; iris of the eye silvery; bill more than an inch long, strong, and furnished on the inside of the upper mandible with a sharp process, like the stump of the broken blade of a penknife, intended to assist the bird in macerating its food; tongue thin, bifid at the end, and lacerated along the sides.

The female is rather less, has the upper part of the head, neck and the back of a dark sooty brown; chin, breast and belly dull pale brown, lightest on the former; wings, tail, lower parts of the back and vent, black, with a few reflexions of dark green; legs, feet, bill and eyes as in the male.

The Purple Grakle is easily tamed, and sings in confinement. They have also in several instances been taught to articulate some few words pretty distinctly.

A singular attachment frequently takes place between this bird and the Fish Hawk. The nest of this latter is of very large dimensions, often from three to four feet in breadth, and from four to five feet high; composed, externally, of large sticks, or faggots, among the interstices of which sometimes three or four pair of Crow Blackbirds will construct their nests, while the Hawk is sitting, or hatching above. Here each pursues the duties of incubation and of rearing their young; living in the greatest harmony, and mutually watching and protecting each other's property from depredators.





SWAMP SPARROW.

FRINGILLA PALUSTRIS.

[Plate XXII.—Fig. 1.]

Passer palustris, BARTRAM, p. 291.—Peale's Museum, No. 6569.

THE history of this obscure and humble species is short and uninteresting. Unknown or overlooked by the naturalists of Europe it is now for the first time introduced to the notice of the world. It is one of our summer visitants, arriving in Pennsylvania early in April, frequenting low grounds, and river courses; rearing two, and sometimes three brood in a season; and returning to the south as the cold weather commences. The immense cypress swamps and extensive grassy flats of the southern states, that border their numerous rivers, and the rich rice plantations abounding with their favorite seeds and sustenance, appear to be the general winter resort, and grand annual rendezvous, of this and all the other species of Sparrow that remain with us during summer. From the river Trent in North Carolina, to that of Savannah, and still farther south, I found this species very numerous; not flying in flocks, but skulking among the canes, reeds, and grass, seeming shy and timorous, and more attached to the water than any other of their tribe. In the month of April numbers pass through Pennsylvania to the northward, which I conjecture from the circumstance of finding them at that season in particular parts of the woods, where during the rest of the year they are not to be The few that remain frequent the swamps, and reedy borders of our creeks and rivers. They form their nest in the ground, sometimes in a tussock of rank grass, surrounded by water, and lay four eggs of a dirty white, spotted with rufous. So late as the

fifteenth of August, I have seen them feeding their young that were scarcely able to fly. Their principal food is grass seeds, wild oats, and insects. They have no song; are distinguished by a single chip or *cheep*, uttered in a rather hoarser tone than that of the Song Sparrow; flirt the tail as they fly; seldom or never take to the trees, but skulk from one low bush or swampy thicket to another.

The Swamp Sparrow is five inches and a half long, and seven inches and a half in extent; the back of the neck and front are black; crown bright bay, bordered with black; a spot of yellowish white between the eye and nostril; sides of the neck and whole breast dark ash; chin white; a streak of black proceeds from the lower mandible, and another from the posterior angle of the eye; back black, slightly skirted with bay; greater coverts also black, edged with bay; wings and tail plain brown; belly and vent brownish white; bill dusky above, bluish below; eyes hazel; legs brown; claws strong and sharp for climbing the reeds. The female wants the bay on the crown, or has it indistinctly; over the eye is a line of dull white.

WHITE-THROATED SPARROW.

FRINGILLA ALBICOLLIS.

[Plate XXII.—Fig. 2.]

Fringilla fusca, BARTRAM, p. 291.—LATH. II, 272.—EDWARDS, 304.—Arct. Zool. p. 373,

No. 248.—Peale's Museum, No. 6486.

THIS is the largest as well as handsomest of all our Sparrows. It winters with the preceding species and several others in most of the states south of New England. From Connecticut to Savannah I found these birds numerous, particularly in the neighbourhood of the Roanoke river, and among the rice plantations. In summer they retire to the higher inland parts of the country, and also farther north to breed. According to Pennant they are also found at that season in Newfoundland. During their residence here in winter, they collect together in flocks, always preferring the borders of swampy thickets, creeks, and millponds, skirted with alder bushes and long rank weeds, the seeds of which form their principal food. Early in spring, a little before they leave us, they have a few remarkably sweet and clear notes, generally in the morning a little after sun rise. About the twentieth of April they disappear, and we see no more of them till the beginning or second week of October, when they again return; part to pass the winter with us; and part on their route farther south.

The length of the White-throated Sparrow is six inches and a half, breadth nine inches; the upper part of the back and the lesser wing coverts are beautifully variegated with black, bay, ash and light brown; a stripe of white passes from the base of the upper mandible to the hind head; this is bordered on each side with a stripe of black; below this again is another of white passing over

each eye, and deepening into orange yellow between that and the nostril; this is again bordered by a stripe of black proceeding from the hind part of the eye; breast ash; chin, belly, and vent white; tail somewhat wedged; legs flesh colored; bill a bluish horn color; eye hazel. In the female the white stripe on the crown is a light drab; the breast not so dark; the chin less pure; and the line of yellow before the eye scarce half as long as in the male. All the parts that are white in the male are in the female of a light drab color.

FOX-COLORED SPARROW.

FRINGILLA RUFA.

[Plate XXII.—Fig. 4.]

Rusty Bunting, Arct. Zool. p. 364, No. 231. Ib. 233.—Ferruginous Finch, Ib. 375, No. 251.—Fringilla rufa, Bartram, p. 291.—Peale's Museum, No. 6092.

THIS plump and pretty species arrives in Pennsylvania from the north about the twentieth of October; frequents low sheltered thickets; associates in little flocks of ten or twelve, and is almost continually scraping the ground, and rustling among the fallen leaves. I found this bird numerous in November among the rich cultivated flats that border the river Connecticut; and was informed that it leaves those places in spring. I also found it in the northern parts of the state of Vermont. Along the borders of the great reed and cypress swamps of Virginia, and North and South Carolina, as well as around the rice plantations, I observed this bird very frequently. They also inhabit Newfoundland.* They are rather of a solitary nature, seldom feeding in the open fields; but generally under thickets, or among tall rank weeds on the edges of fields. They sometimes associate with the Snow-bird, but more generally keep by themselves. Their manners very much resemble those of the Red-eyed Bunting (Plate X, fig. 4.); they are silent, tame, and unsuspicious. They have generally no other note while here than a shep, shep; yet I suspect they have some song in the places where they breed; for I once heard a single one, a little before the time they leave us, warble out a few very sweet low notes.

The Fox-colored Sparrow is six inches long, and nine and a quarter broad; the upper part of the head and neck is cinereous,

edged with rust color; back handsomely mottled with reddish brown and cinereous; wings and tail bright ferruginous; the primaries dusky within and at the tips, the first and second row of coverts, tipt with white; breast and belly white; the former, as well as the ear feathers, marked with large blotches of bright bay, or reddish brown, and the beginning of the belly with little arrow-shaped spots of black; the tail coverts and tail are a bright fox color; the legs and feet a dirty brownish white, or clay color, and very strong; the bill is strong, dusky above and yellow below; iris of the eye hazel. The chief difference in the female is that the wings are not of so bright a bay, inclining more to a drab; yet this is scarcely observable, unless by a comparison of the two together. They are generally very fat, live on grass seeds, eggs of insects, and gravel.

SAVANNAH SPARROW.

FRINGILLA SAVANNA.

Plate XXII.—Fig. 3.—Female.

PEALE'S Museum, No. 6584.

THIS new species is an inhabitant of the low countries on the Atlantic coast, from Savannah, where I first discovered it, to the state of New York; and is generally resident in these places, tho rarely found inland, or far from the sea shore. The drawing of this bird was in the hands of the engraver before I was aware that the male (a figure of which will appear in vol. IV,) was so much its superior in beauty of markings and in general colors. With a representation of the male will also be given particulars of their nest, eggs, and manners, which, from the season, and the few specimens I had the opportunity of procuring, I was at that time unable to collect. I have since found these birds numerous on the sea shore, in the state of New Jersey, particularly near Great Egg harbour. A pair of these I presented to Mr. Peale of this city, in whose noble collection they now occupy a place.

The female of the Savannah Sparrow is five inches and a half long, and eight and a half in extent; the plumage of the back is mottled with black, bright bay and whitish; chin white; breast marked with pointed spots of black, edged with bay, running in chains from each base of the lower mandible; sides touched with long streaks of the same; temples marked with a spot of delicate yellow; ear feathers slightly tinged with the same; belly white, and a little streaked; inside of the shoulders and lining of the wing pale yellowish; first and second rows of wing coverts tipt with whitish; secondaries next the body pointed and very black, edged also with

bay; tail slightly forked, and without any white feathers; legs pale flesh color; hind claw pretty long.

The very slight distinctions of color which nature has drawn between many distinct species of this family of Finches, render these minute and tedious descriptions absolutely necessary, that the particular species may be precisely discriminated.

LOGGERHEAD SHRIKE.

LANIUS CAROLINENSIS.

[Plate XXII.—Fig. 5.]

PEALE'S Museum, No. 557.

THIS species has a considerable resemblance to the Great American Shrike.* It differs however from that bird in size, being a full inch shorter, and in color being much darker on the upper parts; and in having the frontlet black. It also inhabits the warmer parts of the United States; while the Great American Shrike is chiefly confined to the northern regions, and seldom extends to the south of Virginia.

This species inhabits the rice plantations of Carolina and Georgia, where it is protected for its usefulness in destroying mice. It sits, for hours together, on the fence, beside the stacks of rice, watching like a cat; and as soon as it perceives a mouse, darts on it like a Hawk. It also feeds on crickets and grasshoppers. Its note, in March, resembled the clear creaking of a sign board in windy weather. It builds its nest, as I was informed, generally in a detached bush, much like that of the Mocking-bird; but as the spring was not then sufficiently advanced, I had no opportunity of seeing its eggs. It is generally known by the name of the *Logger-head*.

This species is nine inches long, and thirteen in extent; the color above is cinereous or dark ash; scapulars and line over the eye whitish; wings black, with a small spot of white at the base of the primaries, and tipt with white; a stripe of black passes along the front through each eye half way down the side of the neck;

eye dark hazel, sunk below the eyebrow; tail cuneiform, the four middle feathers wholly black; the four exterior ones on each side tipt more and more with white to the outer one, which is nearly all white; whole lower parts white, and in some specimens, both of males and females, marked with transverse lines of very pale brown; bill and legs black.

The female is considerably darker both above and below, but the black does not reach so high on the front; it is also rather less in size.





BELTED KINGSFISHER.

ALCEDO ALCYON.

[Plate XXIII.—Fig. 1.—Female.]

BARTRAM, p. 289.—Turton, p. 278.—Peale's Museum, No. 2145.

THIS is a general inhabitant of the banks and shores of all our fresh water rivers from Hudson's bay to Mexico; and is the only species of its tribe found within the United States. This last circumstance, and its characteristic appearance, make it as universally known here, as its elegant little brother, the common Kingsfisher of Europe, is in Britain. Like the love-lorn swains of whom poets tell us, he delights in murmuring streams and falling waters; not however merely that they may sooth his ear, but for a gratification somewhat more substantial. Amidst the roar of the cataract, or over the foam of a torrent, he sits perched upon an overhanging bough, glancing his piercing eye in every direction below for his scaly prey, which with a sudden circular plunge he sweeps from their native element, and swallows in an instant. His voice, which is not unlike the twirling of a watchman's rattle, is naturally loud, harsh, and sudden; but is softened by the sound of the brawling streams and cascades among which he generally ram-He courses along the windings of the brook or river, at a small height above the surface, sometimes suspending himself by the rapid action of his wings like certain species of Hawks, ready to pounce on the fry below; now and then settling on an old dead overhanging limb to reconnoitre. Mill-dams are particularly visited by this feathered fisher; and the sound of his pipe is as well known to the miller as the rattling of his own hopper. streams with high perpendicular banks, particularly if they be of

a hard clayey or sandy nature, are also favorite places of resort for this bird; not only because in such places the small fish are more exposed to view; but because those steep and dry banks are the chosen situations for his nest. Into these he digs with bill and claws, horizontally, sometimes to the extent of four or five feet, at the distance of a foot or two from the surface. The few materials he takes in are not always placed at the extremity of the hole; that he and his mate may have room to turn with convenience. eggs are five, pure white, and the first brood usually comes out about the beginning of June, and sometimes sooner, according to that part of the country where they reside. On the shores of Kentucky river near the town of Frankfort, I found the female sitting early in They are very tenacious of their haunts, breeding for several successive years in the same hole, and do not readily forsake it, even tho it be visited. An intelligent young gentleman informed me, that having found where a Kingsfisher built, he took away its eggs from time to time, leaving always one behind, until he had taken no less than eighteen from the same nest. At some of these visits, the female being within, retired to the extremity of the hole while he withdrew the egg, and next day, when he returned, he found she had laid again as usual.

The fabulous stories related by the ancients of the nest, manner of hatching, &c. of the Kingsfisher, are too trifling to be repeated here. Over the winds and the waves the humble Kingsfishers of our days, at least the species now before us, have no control. Its nest is neither constructed of glue nor fish bones; but of loose grass and a few feathers. It is not thrown on the surface of the water to float about, with its proprietor, at random; but snugly secured from the winds and the weather in the recesses of the earth; neither is its head or its feathers believed, even by the most illiterate of our clowns or seamen, to be a charm for love, a protection against witchcraft, or a security for fair weather. It is neither venerated like those of the Society isles, nor dreaded like those of

some other countries; but is considered merely as a bird that feeds on fish; is generally fat; relished by *some* as good eating; and is now and then seen exposed for sale in our markets.

Tho the Kingsfisher generally remains with us, in Pennsylvania, until the commencement of cold weather, it is seldom seen here in winter; but returns to us early in April. In North and South Carolina, I observed numbers of these birds in the months of February and March. I also frequently noticed them on the shores of the Ohio, in February, as high up as the mouth of the Muskingum.

I suspect this bird to be a native of the Bahama islands as well as of our continent. In passing between these isles and the Florida shore, in the month of July, a Kingsfisher flew several times round our ship, and afterwards shot off to the south.

The length of this species is twelve inches and a half, extent twenty; back and whole upper parts a light bluish slate color; round the neck is a collar of pure white, which reaches before to the chin; head large, crested, the feathers long and narrow, black in the centre, and generally erect; the shafts of all the feathers, except the white plumage, are black; belly and vent white; sides under the wings variegated with blue, round the upper part of the breast passes a band of blue interspersed with some light brown feathers; before the eye is a small spot of white, and another immediately below it; the bill is three inches long from the point to the slit of the mouth, strong, sharp pointed, and black, except near the base of the lower mandible, and at the tip, where it is of a horn color; primaries and interior webs of the secondaries black, spotted with white; the interior vanes of the tail feathers elegantly spotted with white on a jet black ground; lower side light colored; exterior vanes blue; wing coverts and secondaries marked with small specks of white; legs extremely short; when the bird perches it generally rests on the lower side of the second joint, which is thereby thick and callous; claws stout and black; whole leg of a

dirty yellowish color; above the knee bare of feathers for half an inch; the two exterior toes united together for nearly their whole length.

The female is sprinkled all over with specks of white; the band of blue around the upper part of the breast is nearly half reddish brown; and a little below this passes a band of bright reddish bay, spreading on each side under the wings. The blue and rufous feathers on the breast are strong like scales. The head is also of a much darker blue than the back, and the white feathers on the chin and throat of an exquisite fine glossy texture, like the most beautiful satin.

BLACK AND YELLOW WARBLER.

SYLVIA MAGNOLIA.

[Plate XXIII.—Fig. 2.]

PEALE'S Museum, No. 7783.

THIS bird I first met with on the banks of the Little Miami, near its junction with the Ohio. I afterwards found it among the magnolias, not far from fort Adams on the Mississippi. These two, both of which happened to be males, are all the individuals I have ever shot of this species; from which I am justified in concluding it to be a very scarce bird in the United States. Mr. Peale, however, has the merit of having been the first to discover this elegant species, which he informs me he found several years ago not many miles from Philadelphia. No notice has ever been taken of this bird by any European naturalist whose works I have examined. Its notes, or rather chirpings, struck me as very peculiar and characteristic; but have no claim to the title of song. It kept constantly among the higher branches, and was very active and restless.

Length five inches, extent seven inches and a half; front, lores, and behind the ear, black; over the eye a fine line of white, and another small touch of the same immediately under; back nearly all black; shoulders thinly streaked with olive; rump yellow; tail coverts jet black; inner vanes of the lateral tail feathers white to within half an inch of the tip where they are black; two middle ones wholly black; whole lower parts rich yellow, spotted from the throat downwards with black streaks; vent white; tail slightly forked; wings black, crossed with two broad transverse bars of white; crown fine ash; legs brown; bill black. Markings of the female not known.

BLACKBURNIAN WARBLER.

SYLVIA BLACKBURNIA.

[Plate XXIII.—Fig. 3.]

LATHAM, II, p. 461, No. 67.—PEALE'S Museum, No. 7060.

THIS is another scarce species in Pennsylvania, making its appearance here about the beginning of May; and again in September on its return, but is seldom seen here during the middle of summer. It is an active silent bird. Inhabits also the state of New York, from whence it was first sent to Europe. Mr. Latham has numbered this as a variety of the Yellow-fronted Warbler, a very different species. The specimen sent to Europe, and first described by Pennant, appears also to have been a female, as the breast is said to be yellow, instead of the brilliant orange with which it is ornamented. Of the nest and habits of this bird I can give no account, as there is not more than one or two of these birds to be found here in a season, even with the most diligent search.

The Blackburnian Warbler is four inches and a half long, and seven in extent; crown black, divided by a line of orange; the black again bounded on the outside by a stripe of rich orange passing over the eye; under the eye a small touch of orange yellow; whole throat and breast rich fiery orange, bounded by spots and streaks of black; belly dull yellow, also streaked with black; vent white; back black, skirted with ash; wings the same, marked with a large lateral spot of white; tail slightly forked; the interior vanes of the three exterior feathers white; cheeks black; bill and legs brown. The female is yellow where the male is orange; the black streaks are also more obscure and less numerous.

AUTUMNAL WARBLER.

SYLVIA AUTUMNALIS.

[Plate XXIII.—Fig. 4.]

THIS plain little species regularly visits Pennsylvania from the north in the month of October, gleaning among the willow leaves; but what is singular, is rarely seen in spring. From the first to the fifteenth of October, they may be seen in considerable numbers almost every day in gardens, particularly among the branches of the weeping willow, and seem exceedingly industrious. They have some resemblance in color to the Pine-creeping Warbler; but do not run along the trunk like that bird; neither do they give a preference to the pines. They are also less. After the first of November they are no longer to be found, unless the season be uncommonly mild. These birds doubtless pass through Pennsylvania in spring, on their way to the north; but either make a very hasty journey, or frequent the tops of the tallest trees; for I have never yet met with one of them in that season; tho in October I have seen more than a hundred in an afternoon's excursion.

Length four inches and three quarters, breadth eight inches; whole upper parts olive green, streaked on the back with dusky stripes; tail coverts ash, tipt with olive; tail black, edged with dull white; the three exterior feathers marked near the tip with white; wings deep dusky, edged with olive, and crossed with two bars of white; primaries also tipt, and three secondaries next the body edged, with white; upper mandible dusky brown; lower, as well as the chin and breast, dull yellow; belly and vent white; legs dusky brown; feet and claws yellow; a pale yellow ring surrounds the eye. The males of these birds often warble out some low, but very sweet notes, while searching among the leaves in autumn.

WATER THRUSH.

TURDUS AQUATICUS.

[Plate XXIII.—Fig. 5.]

PEALE'S Museum, No. 6896.

THIS bird is remarkable for its partiality to brooks, rivers, shores, ponds, and streams of water; wading in the shallows in search of aquatic insects, wagging the tail almost continually, chattering as it flies, and, in short, possesses many strong traits and habits of the Water Wagtail. It is also exceedingly shy, darting away on the least attempt to approach it, and uttering a sharp chip, repeatedly, as if greatly alarmed. Among the mountain streams in the state of Tennesee, I found a variety of this bird pretty numerous, with legs of a bright yellow color; in other respects it differed not from the rest. About the beginning of May it passes through Pennsylvania to the north; is seen along the channels of our solitary streams for ten or twelve days; afterwards disappears until August. It is probable that it breeds in the higher mountainous districts even of this state, as do many other of our spring visitants that regularly pass a week or two with us in the lower parts, and then retire to the mountains and inland forests to breed.

But Pennsylvania is not the favorite resort of this species. The cane-brakes, swamps, river shores, and deep watery solitudes of Louisiana, Tennesee, and the Mississippi territory, possess them in abundance; there they are eminently distinguished by the loudness, sweetness and expressive vivacity of their notes, which begin very high and clear, falling with an almost imperceptible gradation till they are scarcely articulated. At these times the musician is perched on the middle branches of a tree over the brook or river

bank, pouring out his charming melody, that may be distinctly heard for nearly half a mile. The voice of this little bird appeared to me so exquisitely sweet and expressive, that I was never tired of listening to it, while traversing the deep shaded hollows of those cane-brakes where it usually resorts. I have never yet met with its nest.

The Water Thrush is six inches long, and nine and a half in extent; the whole upper parts are of a uniform and very dark olive, with a line of white extending over the eye, and along the sides of the neck; the lower parts are white, tinged with yellow ochre; the whole breast and sides are marked with pointed spots or streaks of black or deep brown; bill dusky brown; legs flesh-colored; tail nearly even; bill formed almost exactly like the Golden-crowned Thrush, described in vol. II; and except in frequenting the water, much resembling it in manners. Male and female nearly alike.

PAINTED BUNTING.

EMBERIZA CIRIS.

[Plate XXIV.—Fig. 1, Male.—Fig. 2, Female.]

LINN. Syst. 313.—Painted Finch, Catesby, I, 44.—Edw. 130. 173.—Arct. Zool. p. 362, No. 226.—Le Verdier de la Louisiane, dit vulgairement le Pape, Brisson, III, 200. App. 74.—Buffon, IV, 76. Pl. Enl. 159.—Lath. II, 206.—Linaria ciris, the Painted Finch, or Nonpareil, Bartram, p. 291.—Peale's Museum, No. 6062, and 6063.

THIS is one of the most numerous of the little summer birds of Lower Louisiana, where it is universally known among the French inhabitants, and called by them "Le Pape," and by the Americans the *Nonpareil*. Its gay dress and docility of manners have procured it many admirers; for these qualities are strongly attractive, and carry their own recommendations always along with them. The low countries of the southern states, in the vicinity of the sea, and along the borders of our large rivers, particularly among the rice plantations, are the favorite haunts of this elegant little bird. A few are seen in North Carolina; in South Carolina they are more numerous; and still more so in the lower parts of Georgia. To the westward I first met them at Natchez, on the Mississippi, where they seemed rather scarce. Below Baton Rouge, along the Levee, or embankment of the river, they appeared in greater numbers; and continued to become more common as I approached New Orleans, where they were warbling from almost every fence, and crossing the road before me every few minutes. Their notes very much resemble those of the Indigo Bird (Plate VI, fig. 6.); but want the strength and energy of the latter, being more feeble and more concise.

I found these birds very commonly domesticated in the houses of the French inhabitants of New Orleans; appearing to be the





most common cage bird they have. The negroes often bring them to market from the neighbouring plantations, for sale; either in cages, taken in traps, or in the nest. A wealthy French planter, who lives on the banks of the Mississippi, a few miles below Bayo Fourche, took me into his garden, which is spacious and magnificent, to shew me his aviary; where, among many of our common birds, I observed several Nonpareils, two of which had nests, and were then hatching.

Were the same attention bestowed on these birds as on the Canary, I have no doubt but they would breed with equal facility, and become equally numerous and familiar, while the richness of their plumage might compensate for their inferiority of song. Many of them have been transported to Europe; and I think I have somewhere read that in Holland attempts have been made to breed them and with success. When the employments of the people of the United States become more sedentary, like those of Europe, the innocent and agreeable amusement of keeping and rearing birds in this manner, will become more general than it is at present, and their manners better known. And I cannot but think, that an intercourse with these little innocent warblers is favorable to delicacy of feeling, and sentiments of humanity; for I have observed the rudest and most savage softened into benevolence while contemplating the interesting manners of these inoffensive little creatures.

Six of these birds, which I brought with me from New Orleans by sea, soon became reconciled to the cage. In good weather the males sung with great sprightliness, tho they had been caught only a few days before my departure. They were greedily fond of flies, which accompanied us in great numbers during the whole voyage; and many of the passengers amused themselves with catching these and giving them to the Nonpareils; till at length the birds became so well acquainted with this amusement, that as soon as they perceived any of the people attempting to catch flies, they assem-

bled at the front of the cage, stretching out their heads through the wires with eager expectation, evidently much interested in the issue of their success.

These birds arrive in Louisiana from the south about the middle of April, and begin to build early in May. In Savannah, according to Mr. Abbot, they arrive about the twentieth of April. Their nests are usually fixed in orange hedges, or on the lower branches of the orange tree; I have also found them in a common bramble or blackberry bush. They are formed exteriorly of dry grass, intermingled with the silk of caterpillars, lined with hair, and lastly with some extremely fine roots of plants. The eggs are four or five, white, or rather pearl colored, marked with purplish brown specks. As some of these nests had eggs so late as the twenty. fifth of June, I think it probable that they sometimes raise two brood in the same season. The young birds of both sexes, during the first season, are of a fine green olive above, and dull yellow The females undergo little or no change, but that of becoming of a more brownish cast. The males, on the contrary, are long and slow in arriving at their full variety of colors. In the second season the blue on the head begins to make its appearance, intermixed with the olive green. The next year the yellow shews itself on the back and rump; and also the red, in detached spots, on the throat and lower parts. All these colors are completed in the fourth season, except, sometimes, that the green still continues on the tail. On the fourth and fifth season the bird has attained his complete colors, and appears then as represented in the plate (fig. 1.). No dependance, however, can be placed on the regularity of this change in birds confined in a cage, as the want of proper food, sunshine, and variety of climate, all conspire against the regular operations of nature.

The Nonpareil is five inches and three quarters long, and eight inches and three quarters in extent; head, neck above, and sides of the same, a rich purplish blue; eyelid, chin, and whole

lower parts, vermilion; back and scapulars glossy yellow, stained with rich green, and in old birds with red; lesser wing coverts purple; larger green; wings dusky red, sometimes edged with green; lower part of the back, rump and tail coverts deep glossy red, inclining to carmine; tail slightly forked, purplish brown (generally green); legs and feet leaden grey; bill black above, pale blue below; iris of the eye hazel.

The female (fig. 2.) is five and a half inches long, and eight inches in extent; upper parts green olive, brightest on the rump; lower parts a dusky Naples yellow, brightest on the belly, and tinged considerably on the breast with dull green, or olive; cheeks or ear-feathers marked with lighter touches; bill wholly a pale lead color, lightest below; legs and feet the same.

The food of these birds consists of rice, insects, and various kinds of seeds that grow luxuriantly in their native haunts. I also observed them eating the seeds or internal grains of ripe figs. They frequent gardens, building within a few paces of the house; are particularly attached to orangeries; and chant occasionally during the whole summer. Early in October they retire to more southern climates, being extremely susceptible of cold.

PROTHONOTARY WARBLER.

SYLVIA PROTONOTARIUS.

[Plate XXIV.—Fig. 3.]

Arct. Zool. p. 410.—Buffon, V, 316.—Latham, II, 494. Pl. Enl. 704.—Peale's Museum, No. 7020.

THIS is an inhabitant of the same country as the preceding species; and also a passenger from the south; with this difference, that the bird now before us seldom approaches the house or garden; but keeps among the retired deep and dark swampy woods, through which it flits nimbly in search of small caterpillars; uttering every now and then a few screaking notes, scarcely worthy of notice. They are abundant in the Mississippi and New Orleans territories, near the river; but are rarely found on the high ridges inland.

From the peculiar form of its bill, being roundish and remarkably pointed, this bird might with propriety be classed as a subgenera, or separate family, including several others, viz. the Bluewinged Yellow Warbler; the Golden-crowned Warbler, and Golden-winged Warbler of the second volume, and the Worm-eating Warbler of the present plate, and a few more. The bills of all these correspond nearly in form and pointedness, being generally longer, thicker at the base, and more round than those of the genus Sylvia, generally. The first mentioned species, in particular, greatly resembles this in its general appearance; but the bill of the Prothonotary is rather stouter, and the yellow much deeper, extending farther on the back; its manners and the country it inhabits are also different.

This species is five inches and a half long, and eight and a half in extent; the head, neck, and whole lower parts (except the vent) are of a remarkably rich and brilliant yellow, slightly inclining to orange; vent white; back, scapulars and lesser wing coverts yellow olive; wings, rump and tail coverts a lead blue; interior vanes of the former black; tail nearly even, and black, broadly edged with blue, all the feathers, except the two middle ones, are marked on their inner vanes near the tip with a spot of white; bill long, stout, sharp pointed and wholly black; eyes dark hazel; legs and feet a leaden grey. The female differs in having the yellow and blue rather of a duller tint; the inferiority, however, is scarcely noticeable.

WORM-EATING WARBLER.

SYLVIA VERMIVORA.

Plate XXIV.—Fig. 4.

Arct. Zool. p. 406, No. 300.—Edwards, 305.—Latham, II, 499.—Le Demi-fin mangeur de vers, Buffon, V, 325.—Peale's Museum, No. 6848.

THIS is one of the nimblest species of its whole family, inhabiting the same country with the preceding; but extending its migrations much farther north. It arrives in Pennsylvania about the middle of May; and leaves us in September. I have never yet met with its nest; but have seen them feeding their young about the twenty-fifth of June. This bird is remarkably fond of spiders, darting about wherever there is a probability of finding these insects. If there be a branch broken and the leaves withered, it shoots among them in preference to every other part of the tree, making a great rustling in search of its prey. I have often watched its manœuvres while thus engaged and flying from tree to tree in search of such places. On dissection I have uniformly found their stomachs filled with spiders or caterpillars, or both. Its note is a feeble chirp, rarely uttered.

The Worm-eater is five inches and a quarter in length, and eight inches in extent; back, tail, and wings a fine clear olive; tips and inner vanes of the wing quills a dusky brown; tail slightly forked, yet the exterior feathers are somewhat shorter than the middle ones; head and whole lower parts a dirty buff; the former marked with four streaks of black, one passing from each nostril, broadening as it descends the hind head; and one from the posterior angle of each eye; the bill is stout, straight, pretty thick at the base, roundish and tapering to a fine point; no bristles at

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the side of the mouth; tongue thin, and lacerated at the tip; the breast is most strongly tinged with the orange buff; vent waved with dusky olive; bill blackish above, flesh colored below; legs and feet a pale clay color; eye dark hazel. The female differs very little in color from the male.

On this species Mr. Pennant makes the following remarks.— "Does not appear in Pennsylvania till July in its passage north-"ward. Does not return the same way; but is supposed to go be-"yond the mountains which lie to the west. This seems to be the "case with all the transient vernal visitants of Pennsylvania."* That a small bird should permit the whole spring and half of the summer to pass away before it thought of "passing to the north to breed," is a circumstance one should think would have excited the suspicion of so discerning a naturalist as the author of Arctic Zoology, as to its truth. I do not know that this bird breeds to the northward of the United States. As to their returning home by "the country beyond the mountains," this must doubtless be for the purpose of finishing the education of their striplings here, as is done in Europe, by making the grand tour. This by the by would be a much more convenient retrograde route for the ducks and geese; as, like the Kentuckians, they could take advantage of the current of the Ohio and Mississippi, to float down to the southward. Unfortunately however for this pretty theory, all our vernal visitants with which I am acquainted, are contented to plod home by the same regions through which they advanced; not even excepting the geese.

^{*} Arct. Zool. p. 406.

YELLOW-WINGED SPARROW.

FRINGILLA PASSERINA.

[Plate XXIV.—Fig. 5.]

PEALE's Museum, No. 6585.

THIS small species is now for the first time introduced to the notice of the public. I can, however, say little towards illustrating its history, which, like that of many individuals of the human race, would be but a dull detail of humble obscurity. It inhabits the lower parts of New York and Pennsylvania; is very numerous on Staten island, where I first observed it; and occurs also along the sea coast of New Jersey. But tho it breeds in each of these places, it does not remain in any of them during the winter. It has a short, weak, interrupted chirrup, which it occasionally utters from the fences and tops of low bushes. Its nest is fixed on the ground, among the grass; is formed of loose dry grass, and lined with hair and fibrous roots of plants. The eggs are five, of a greyish white sprinkled with brown. On the first of August I found the female sitting.

I cannot say what extent of range this species has, having never met with it in the southern states; tho I have no doubt that it winters there with many others of its tribe. It is the scarcest of all our summer Sparrows. Its food consists principally of grass seeds, and the larvæ of insects, which it is almost continually in search of among the loose soil and on the surface, consequently it is more useful to the farmer than otherwise.

The length of this species is five inches, extent eight inches; upper part of the head blackish, divided by a slight line of white; hind head and neck above marked with short lateral touches of

black and white; a line of yellow extends from above the eye to the nostril; cheeks plain brownish white; back streaked with black, brown, and pale ash; shoulders of the wings above and below, and lesser coverts olive yellow; greater wing coverts black, edged with pale ash; primaries light drab; tail the same, the feathers rather pointed at the ends, the outer ones white; breast plain yellowish white, or pale ochre, which distinguishes it from the Savannah Sparrow (plate XXII, fig. 3.); belly and vent white; three or four slight touches of dusky at the sides of the breast; legs flesh color; bill dusky above, pale bluish white below. The male and female are nearly alike in color.

BLUE GROSBEAK.

LOXIA CÆRULEA.

[Plate XXIV.—Fig. 6.]

Einn. Syst. 304.—Latham, III, 116.—Arct. Zool. p. 351, No. 217.—Catesby, I, 39.—Buffon, III, 454. Pl. Enl. 154.—Peale's Museum, No. 5826.

THIS solitary and retired species inhabits the warmer parts of America, from Guiana, and probably farther south,* to Virgi-Mr. Bartram also saw it during a summer's residence near Lancaster, Pennsylvania. In the United States, however, it is a scarce species; and having but few notes, is more rarely observed. Their most common note is a loud chuck; they have also at times a few low sweet toned notes. They are sometimes kept in cages in Carolina; but seldom sing in confinement. The individual represented in the plate was a very elegant specimen, in excellent order, the just arrived from Charleston, South Carolina. During its stay with me, I fed it on Indian corn, which it seemed to prefer, easily breaking with its powerful bill the hardest grains. They also feed on hemp seed, millet, and the kernels of several kinds of berries. They are timid birds, watchful, silent and active, and generally neat in their plumage. Having never yet met with their nest, I am unable at present to describe it.

The Blue Grosbeak is six inches long, and ten inches in extent; lores and frontlet black; whole upper parts a rich purplish blue, more dull on the back, where it is streaked with dusky; greater wing coverts black, edged at the tip with bay; next superior row wholly chesnut; rest of the wing black, skirted with blue; tail forked, black, slightly edged with bluish, and sometimes mi-

nutely tipt with white; legs and feet lead color; bill a dusky bluish horn color; eye large, full and black.

The female is of a dark drab color, tinged with blue, and considerably lightest below. I suspect the males are subject to a change of color during winter. The young, as usual with many other species, do not receive the blue color until the ensuing spring; and till then very much resemble the female.

Latham makes two varieties of this species; the first wholly blue, except a black spot between the bill and eye; this bird inhabits Brasil, and is figured by Brisson, Orn. III, 321, No. 6. pl. 17, fig. 2. The other is also generally of a fine deep blue, except the quills, tail and legs, which are black; this is Edwards' "Blue Grosbeak from Angola," pl. 125; which Dr. Latham suspects to have been brought from some of the Brasilian settlements, and considers both as mere varieties of the first. I am sorry I cannot at present clear up this matter, but shall take some farther notice of it hereafter.

MISSISSIPPI KITE.

FALCO MISISIPPIENSIS.

[Plate XXV.—Fig. 1, Male.]

PEALE'S Museum, No. 403.

THIS new species I first observed in the Mississippi territory, a few miles below Natchez, on the plantation of William Dunbar, esquire, where the bird represented in the plate was obtained, after being slightly wounded; and the drawing made with great care from the living bird. To the hospitality of the gentleman above mentioned and his amiable family, I am indebted for the opportunity afforded me of procuring this and one or two more new species. This excellent man (whose life has been devoted to science) tho at that time confined to bed by a severe and dangerous indisposition, and personally unacquainted with me, no sooner heard of my arrival at the town of Natchez, than he sent a servant and horses, with an invitation and request, to come and make his house my home and head quarters, while engaged in exploring that part of the country. The few happy days I spent there I shall never forget.

In my perambulations I frequently remarked this Hawk sailing about in easy circles, and at a considerable height in the air, generally in company with the Turkey Buzzards, whose manner of flight it so exactly imitates as to seem the same species, only in miniature or seen at a more immense height. Why these two birds, whose food and manners, in other respects, are so different, should so frequently associate together in air, I am at a loss to comprehend. We cannot for a moment suppose them mutually deceived by the similarity of each other's flight: the keenness of





their vision forbids all suspicion of this kind. They may perhaps be engaged, at such times, in mere amusement, as they are observed to soar to great heights previous to a storm; or, what is more probable, may both be in pursuit of their respective food. One that he may reconnoitre a vast extent of surface below, and trace the tainted atmosphere to his favorite carrion; the other in search of those large beetles, or coleopterous insects, that are known often to wing the higher regions of the air; and which, in the three individuals of this species of Hawk which I examined by dissection, were the only substances found in their stomachs. For several miles, as I passed near Bayo Manchak, the trees were swarming with a kind of cicada, or locust, that made a deafening noise; and here I observed numbers of the Hawk now before us sweeping about among the trees like Swallows, evidently in pursuit of these locusts; so that insects, it would appear, are the principal food of this species. Yet when we contemplate the beak and talons of this bird, both so sharp and powerful, it is difficult to believe that they were not intended by nature for some more formidable prey than beetles, locusts, or grasshoppers; and I doubt not but mice, lizards, snakes and small birds, furnish him with an occasional repast.

This Hawk, tho wounded and precipitated from a vast height, exhibited, in his distress, symptoms of great strength, and an almost unconquerable spirit. I no sooner approached to pick him up than he instantly gave battle, striking rapidly with his claws, wheeling round and round as he lay partly on his rump; and defending himself with great vigilance and dexterity; while his dark red eye sparkled with rage. Notwithstanding all my caution in seizing him to carry him home, he struck his hind claw into my hand with such force as to penetrate into the bone. Anxious to preserve his life, I endeavoured gently to disengage it; but this made him only contract it the more powerfully, causing such pain that I had no other alternative but that of cutting the sinew of his heel with my penknife. The whole time he lived with me, he seemed to

watch every movement I made; erecting the feathers of his hind head, and eyeing me with savage fierceness; considering me, no doubt, as the greatest savage of the two. What effect education might have had on this species under the tutorship of some of the old European professors of falconry, I know not; but if extent of wing, and energy of character, and ease and rapidity of flight, would have been any recommendations to royal patronage, this species possesses all these in a very eminent degree.

The long pointed wings and forked tail point out the affinity of this bird to that family, or subdivision of the Falco genus, distinguished by the name of Kites, which sail without flapping the wings, and eat from their talons as they glide along.

The Mississippi Kite measures fourteen inches in length, and thirty-six inches, or three feet, in extent! The head, neck, and exterior webs of the secondaries, are of a hoary white; the lower parts a whitish ash; bill, cere, lores, and narrow line round the eye, black; back, rump, scapulars, and wing coverts dark blackish ash; wings very long and pointed, the third quill the longest; the primaries are black, marked down each side of the shaft with reddish sorrel; primary coverts also slightly touched with the same; all the upper plumage at the roots is white; the scapulars are also spotted with white; but this cannot be perceived unless the feathers be blown aside; tail slightly forked, and, as well as the rump, jet black; legs vermilion, tinged with orange, and becoming blackish towards the toes; claws black; iris of the eye dark red, pupil black.

This was a male. With the female, which is expected soon from that country, I shall, in a future volume, communicate such further information relative to their manners and incubation, as I may be able to collect.

TENNESEE WARBLER.

SYLVIA PEREGRINA.

[Plate XXV.—Fig. 2.]

PEALE'S Museum, No. 7787.

THIS plain little bird has hitherto remained unknown. I first found it on the banks of Cumberland river, in the state of Tennesee, and suppose it to be a rare species, having since met with only two individuals of the same species. It was hunting nimbly among the young leaves, and like all the rest of the family of Worm-eaters, to which by its bill it evidently belongs, seemed to partake a good deal of the habits of the Titmouse. Its notes were few and weak; and its stomach on dissection contained small green caterpillars, and a few winged insects.

As this species is so very rare in the United States, it is most probably a native of a more southerly climate, where it may be equally numerous with any of the rest of its genus. The small Cerulean Warbler, (plate XVII, fig. 5.) which in Pennsylvania, and almost all over the Atlantic states, is extremely rare, I found the most numerous of its tribe in Tennesee and West Florida; and the Carolina Wren of the same volume, (plate XII, fig. 5.) which is also scarce to the northward of Maryland, is abundant through the whole extent of country from Pittsburgh to New Orleans.

Particular species of birds, like different nations of men, have their congenial climes and favorite countries; but wanderers are common to both; some in search of better fare; some of adventures; others led by curiosity; and many driven by storms and accident. The Tennesee Warbler is four inches and three quarters long, and eight inches in extent; the back, rump and tail coverts, are of a rich yellow olive; lesser wing coverts the same; wings deep dusky, edged broadly with yellow olive; tail forked, olive, relieved with dusky; cheeks and upper part of the head inclining to light bluish, and tinged with olive; line from the nostrils over the eye pale yellow, fading into white; throat and breast pale cream color; belly and vent white; legs purplish brown; bill pointed and thicker at the base than those of the Sylvia genus generally are; upper mandible dark dusky, lower somewhat paler; eye hazel.

The female differs little, in the color of her plumage, from the male; the yellow line over the eye is more obscure, and the olive not of so rich a tint.

KENTUCKY WARBLER.

SYLVIA FORMOSA.

Plate XXV.—Fig. 3.

PEALE'S Museum, No. 7786.

THIS new and beautiful species inhabits the country whose name it bears. It is also found generally in all the intermediate tracts between Nashville and New Orleans, and below that as far as the Balize, or mouths of the Mississippi; where I heard it several times, twittering among the high rank grass and low bushes of those solitary and desolate looking morasses. In Kentucky and Tennesee it is particularly numerous, frequenting low damp woods, and builds its nest in the middle of a thick tuft of rank grass, sometimes in the fork of a low bush, and sometimes on the ground; in all of which situations I have found it. The materials are loose dry grass, mixed with the light pith of weeds, and lined with hair. The female lays four, and sometimes six eggs, pure white, sprinkled with specks of reddish. I observed her sitting early in May. This species is seldom seen among the high branches; but loves to frequent low bushes and cane swamps, and is an active sprightly bird. Its notes are loud, and in threes, resembling, tweedle, tweedle, tweedle. It appears in Kentucky from the south about the middle of April; and leaves the territory of New Orleans on the approach of cold weather; at least I was assured that it does not remain there during the winter. It appeared to me to be a restless, fighting species; almost always engaged in pursuing some of its fellows; tho this might have been occasioned by its numbers, and the particular season of spring, when love and jealousy rage with violence in the breasts of the feathered tenants of the grove; who

experience all the ardency of those passions no less than their lord and sovereign man.

The Kentucky Warbler is five inches and a half long, and eight inches in extent; the upper parts are an olive green; line over the eye and partly under it, and whole lower parts, rich brilliant yellow; head slightly crested, the crown deep black, towards the hind part spotted with light ash; lores, and spot curving down the neck, also black; tail nearly even at the end, and of a rich olive green; interior vanes of that and the wings dusky; legs an almost transparent pale flesh color.

The female wants the black under the eye, and the greater part of that on the crown, having those parts yellowish. This bird is very abundant in the moist woods along the Tennesee and Cumberland rivers.

PRAIRIE WARBLER.

SYLVIA MINUTA.

[Plate XXV.—Fig. 4.]

PEALE'S Museum, No. 7784.

THIS pretty little species I first discovered in that singular tract of country in Kentucky, commonly called the Barrens. I shot several afterwards in the open woods of the Chactaw nation, where they were more numerous. They seem to prefer these open plains, and thinly wooded tracts; and have this singularity in their manners, that they are not easily alarmed; and search among the leaves the most leisurely of any of the tribe I have yet met with; seeming to examine every blade of grass, and every leaf; uttering at short intervals a feeble chirr. I have observed one of these birds to sit on the lower branch of a tree for half an hour at a time, and allow me to come up nearly to the foot of the tree, without seeming to be in the least disturbed, or to discontinue the regularity of its occasional note. In activity it is the reverse of the preceding species; and is rather a scarce bird in the countries where I found it. Its food consists principally of small caterpillars and winged insects.

The Prairie Warbler is four inches and a half long, and six inches and a half in extent; the upper parts are olive, spotted on the back with reddish chesnut; from the nostril over and under the eye, yellow; lores black; a broad streak of black also passes beneath the yellow under the eye; small pointed spots of black reach from a little below that along the side of the neck and under the wings; throat, breast and belly rich yellow; vent cream colored, tinged with yellow; wings dark dusky olive; primaries and

greater coverts edged and tipt with pale yellow; second row of coverts wholly yellow; lesser, olive; tail deep brownish black, lighter on the edges, the three exterior feathers broadly spotted with white.

The female is destitute of the black mark under the eye; has a few slight touches of blackish along the sides of the neck; and some faint shades of brownish red on the back.

The nest of this species is of very neat and delicate workmanship, being pensile, and generally hung on the fork of a low bush or thicket; it is formed outwardly of green moss, intermixed with rotten bits of wood and caterpillars silk; the inside is lined with extremely fine fibres of grape-vine bark; and the whole would scarcely weigh a quarter of an ounce. The eggs are white, with a few brown spots at the great end. These birds are migratory, departing for the south in October.





CAROLINA PARROT.

PSITTACUS CAROLINENSIS.

[Plate XXVI.—Fig. 1.]

LINN. Syst. 141.—CATESBY, I, 11.—LATHAM, I, 227.—Arct. Zool. 242, No. 132. Ibid.
133.—Peale's Museum, No. 762.

OF one hundred and sixty eight kinds of Parrots enumerated by European writers as inhabiting the various regions of the globe, this is the only species found native within the territory of the United States. The vast and luxuriant tracts lying within the torrid zone seem to be the favorite residence of those noisy, numerous and richly plumaged tribes. The count de Buffon has indeed circumscribed the whole genus of Parrots to a space not extending more than twenty-three degrees on each side of the equator; but later discoveries have shewn this statement to be incorrect; as these birds have been found on our continent as far south as the straits of Magellan, and even on the remote shores of Van Diemen's Land, in Terra Australasia. The species now under consideration is also known to inhabit the interior of Louisiana, and the shores of the Mississippi and Ohio and their tributary waters, even beyond the Illinois river, to the neighbourhood of lake Michigan in lat. 42° North; and, contrary to the generally received opinion, is chiefly resident in all these places. Eastward, however, of the great range of the Alleghany, it is seldom seen farther north than the state of Maryland; tho straggling parties have been occasionally observed among the vallies of the Juniata; and according to some, even twenty-five miles to the north-west of Albany, in the state of New York.* But such accidental visits furnish no cer-

^{*} BARTON's Fragments, &c. p. 6, Introd.

tain criteria by which to judge of their usual extent of range; those aerial voyagers, as well as others who navigate the deep, being subject to be cast away, by the violence of the elements, on distant shores and unknown countries.

From these circumstances of the northern residence of this species, we might be justified in concluding it to be a very hardy bird, more capable of sustaining cold than nine-tenths of its tribe; and so I believe it is; having myself seen them, in the month of February, along the banks of the Ohio, in a snow storm, flying about like pigeons, and in full cry.

The preference, however, which this bird gives to the western countries lying in the same parallel of latitude with those eastward of the Alleghany mountains, which it rarely or never visits, is worthy of remark; and has been adduced, by different writers, as a proof of the superior mildness of climate in the former to that of the latter. But there are other reasons for this partiality equally powerful, the hitherto overlooked; namely, certain peculiar features of country to which these birds are particularly and strongly attached; these are, low rich alluvial bottoms, along the borders of creeks, covered with a gigantic growth of sycamore trees or button wood—deep and almost impenetrable swamps, where the vast and towering cypress lift their still more majestic heads; and those singular salines, or as they are usually called licks, so generally interspersed over that country, and which are regularly and eagerly visited by the Parakeets. A still greater inducement is the superior abundance of their favorite fruits. That food which the Parakeet prefers to all others, is the seeds of the cockle burr, a plant rarely found in the lower parts of Pennsylvania, or New York; but which unfortunately grows in too great abundance along the shores of the Ohio and Mississippi, so much so as to render the wool of those sheep that pasture where it most abounds, scarcely worth the cleaning, covering them with one solid mass of burrs, wrought up and imbedded into the fleece, to the great annoyance of this va-

The seeds of the cypress tree and hackberry, as luable animal. well as beech nuts, are also great favorites with these birds; the two former of which are not commonly found in Pennsylvania, and the latter by no means so general or so productive. Here then are several powerful reasons, more dependant on soil than climate, for the preference given by these birds to the luxuriant regions of the west. Pennsylvania, indeed, and also Maryland, abound with excellent apple orchards, on the ripe fruit of which the Parakeets occasionally feed. But I have my doubts whether their depredations in the orchard be not as much the result of wanton play and mischief, as regard for the seeds of the fruit, which they are supposed to be in pursuit of. I have known a flock of these birds alight on an apple tree, and have myself seen them twist off the fruit, one by one, strewing it in every direction around the tree, without observing that any of the depredators descended to pick them up. To a Parakeet which I wounded and kept for some considerable time I very often offered apples, which it uniformly rejected; but burrs, or beech nuts, never. To another very beautiful one which I brought from New Orleans, and which is now sitting in the room beside me, I have frequently offered this fruit, and also the seeds separately, which I never knew it to taste. Their local attachments also prove that food more than climate determines their choice of country. For even in the states of Ohio, Kentucky, and the Mississippi territory, unless in the neighbourhood of such places as have been described, it is rare to see them. The inhabitants of Lexington, as many of them assured me, scarcely ever observe them in that quarter. In passing from that place to Nashville, a distance of two hundred miles, I neither heard nor saw any, but at a place called Madison's lick. In passing on I next met with them on the banks and rich flats of the Tennesee river; after this I saw no more till I reached Bayo St. Pierre, a distance of several hundred miles; from all which circumstances I think we cannot from the residences of these birds establish with propriety,

any correct standard by which to judge of the comparative temperatures of different climates.

In descending the river Ohio, by myself, in the month of February, I met with the first flock of Parakeets at the mouth of the Little Sioto. I had been informed, by an old and respectable inhabitant of Marietta, that they were sometimes, tho rarely, seen there. I observed flocks of them, afterwards, at the mouth of the Great and Little Miami, and in the neighbourhood of numerous creeks that discharge themselves into the Ohio. At Big Bone lick, thirty miles above the mouth of Kentucky river, I saw them in great numbers. They came screaming through the woods in the morning, about an hour after sunrise, to drink the salt water, of which they, as well as the pigeons, are remarkably fond. When they alighted on the ground it appeared at a distance as if covered with a carpet of the richest green, orange and yellow. They afterwards settled, in one body, on a neighbouring tree, which stood detached from any other, covering almost every twig of it, and the sun shining strongly on their gay and glossy plumage, produced a very beautiful and splendid appearance. Here I had an opportunity of observing some very particular traits of their character. Having shot down a number, some of which were only wounded, the whole flock swept repeatedly around their prostrate companions, and again settled on a low tree, within twenty yards of the spot where I stood. At each successive discharge, tho showers of them fell, yet the affection of the survivors seemed rather to increase; for after a few circuits around the place, they again alighted near me, looking down on their slaughtered companions with such manifest symptoms of sympathy and concern, as entirely disarmed me. I could not but take notice of the remarkable contrast between their elegant manner of flight, and their lame and crawling gait among the branches. They fly very much like the Wild Pigeon, in close compact bodies, and with great rapidity, making a loud and outrageous screaming, not unlike that of the Red-headed

Woodpecker. Their flight is sometimes in a direct line; but most usually circuitous, making a great variety of elegant and easy serpentine meanders, as if for pleasure. They are particularly attached to the large sycamores, in the hollow of the trunks and branches of which they generally roost, thirty or forty, and sometimes more, entering at the same hole. Here they cling close to the sides of the tree, holding fast by the claws and also by the They appear to be fond of sleep, and often retire to their holes during the day, probably to take their regular siesta. They are extremely sociable with and fond of each other, often scratching each other's heads and necks, and always at night nestling as close as possible to each other, preferring, at that time, a perpendicular position, supported by their bill and claws. In the Fall, when their favorite cockle burrs are ripe, they swarm along the coast or high grounds of the Mississippi, above New Orleans, for a great extent. At such times they are killed and eaten by many of the inhabitants; tho I confess I think their flesh very indiffer-I have several times dined on it from necessity in the woods; but found it merely passable, with all the sauce of a keen appetite to recommend it.

A very general opinion prevails, that the brains and intestines of the Carolina Parakeet are a sure and fatal poison to cats. I had determined, when at Big Bone, to put this to the test of experiment; and for that purpose collected the brains and bowels of more than a dozen of them. But after close search Mrs. Puss was not to be found, being engaged perhaps on more agreeable business. I left the medicine with Mr. Colquhoun's agent, to administer it by the first opportunity, and write me the result; but I have never yet heard from him. A respectable lady near the town of Natchez, and on whose word I can rely, assured me, that she herself had made the experiment, and, that whatever might be the cause, the cat had actually died either on that or the succeeding day. A French planter near Bayo Fourche pretended to account

to me for this effect by positively asserting, that the seeds of the cockle burrs on which the Parakeets so eagerly feed, were deleterious to cats; and thus their death was produced by eating the intestines of the bird. These matters might easily have been ascertained on the spot, which, however, a combination of trifling circumstances prevented me from doing. I several times carried a dose of the first description in my pocket till it became insufferable, without meeting with a suitable *patient*, on whom, like other professional gentlemen, I might conveniently make a fair experiment.

I was equally unsuccessful in my endeavours to discover the time of incubation or manner of building among these birds. agreed that they breed in hollow trees; and several affirmed to me that they had seen their nests. Some said they carried in no materials; others that they did. Some made the eggs white; others speckled. One man assured me that he cut down a large beech tree, which was hollow, and in which he found the broken fragments of upwards of twenty Parakeets' eggs which were of a greenish yellow color. The nests, tho destroyed in their texture by the falling of the tree, appeared, he said, to be formed of small twigs glued to each other, and to the side of the tree, in the manner of the Chimney Swallow. He added, that if it were the proper season, he could point out to me the weed from which they procured the gluey matter. From all these contradictory accounts nothing certain can be deduced, except that they build in companies, in hollow trees. That they commence incubation late in summer, or very early in spring, I think highly probable, from the numerous dissections I made in the months of March, April, May and June; and the great variety which I found in the color of the plumage of the head and neck, of both sexes, during the two former of these months, convinces me, that the young birds do not receive their full colors until the early part of the succeeding summer.

While Parrots and Parakeets, from foreign countries, abound in almost every street of our large cities, and become such great favorites, no attention seems to have been paid to our own, which in elegance of figure and beauty of plumage is certainly superior to many of them. It wants indeed that disposition for perpetual screaming and chattering that renders some of the former pests, not only to their keepers, but to the whole neighbourhood in which they reside. It is alike docile and sociable; soon becomes perfectly familiar; and until equal pains be taken in its instruction, it is unfair to conclude it incapable of equal improvement in the language of man.

As so little has hitherto been known of the disposition and manners of this species, the reader will not, I hope, be displeased at my detailing some of these, in the history of a particular favorite, my sole companion in many a lonesome day's march, and of which the figure in the plate is a faithful resemblance.

Anxious to try the effects of education on one of those which I procured at Big Bone lick, and which was but slightly wounded in the wing, I fixed up a place for it in the stern of my boat, and presented it with some cockle burrs, which it freely fed on in less than an hour after being on board. The intermediate time between eating and sleeping was occupied in gnawing the sticks that formed its place of confinement, in order to make a practicable breach; which it repeatedly effected. When I abandoned the river and travelled by land, I wrapt it up closely in a silk handkerchief, tying it tightly around, and carried it in my pocket. When I stopped for refreshment, I unbound my prisoner, and gave it its allowance, which it generally dispatched with great dexterity, unhusking the seeds from the burr in a twinkling; in doing which it always employed its left foot to hold the burr, as did several others that I kept for some time. I began to think that this might be peculiar to the whole tribe, and that the whole were, if I may use the expression, left-footed; but by shooting a number afterwards while engaged in eating mulberries, I found sometimes the left, sometimes the right foot stained with the fruit; the other always clean;

from which, and the constant practice of those I kept, it appears, that like the human species in the use of their hands, they do not prefer one or the other indiscriminately, but are either left or rightfooted. But to return to my prisoner. In recommitting it to "durance vile" we generally had a quarrel; during which it frequently paid me in kind for the wound I had inflicted, and for depriving it of liberty, by cutting and almost disabling several of my fingers with its sharp and powerful bill. The path through the wilderness between Nashville and Natchez is in some places bad beyond description. There are dangerous creeks to swim, miles of morass to struggle through, rendered almost as gloomy as night by a prodigious growth of timber, and an underwood of canes and other evergreens; while the descent into these sluggish streams is often ten or fifteen feet perpendicular into a bed of deep clay. In some of the worst of these places, where I had, as it were, to fight my way through, the Parakeet frequently escaped from my pocket, obliging me to dismount and pursue it through the worst of the morass before I could regain it. On these occasions I was several times tempted to abandon it; but I persisted in bringing it along. When at night I encamped in the woods, I placed it on the baggage beside me, where it usually sat, with great composure, dozing and gazing at the fire till morning. In this manner I carried it upwards of a thousand miles in my pocket, where it was exposed all day to the jolting of the horse, but regularly liberated at meal times and in the evening, at which it always expressed great satisfaction. In passing through the Chickasaw and Chactaw nations, the Indians, wherever I stopped to feed, collected around me, men, women and children, laughing and seeming wonderfully amused with the novelty of my companion. The Chickasaws called it in their language "Kelinky;" but when they heard me call it Poll, they soon repeated the name; and wherever I chanced to stop among these people, we soon became familiar with each other through the medium of Poll. On arriving at Mr. Dunbar's, below Natchez, I pro-

cured a cage, and placed it under the piazza, where by its call it soon attracted the passing flocks, such is the attachment they have for each other. Numerous parties frequently alighted on the trees immediately above, keeping up a constant conversation with the prisoner. One of these I wounded slightly in the wing, and the pleasure Poll expressed on meeting with this new companion was really amusing. She crept close up to it as it hung on the side of the cage, chattered to it in a low tone of voice, as if sympathizing in its misfortune, scratched about its head and neck with her bill; and both at night nestled as close as possible to each other, sometimes Poll's head being thrust among the plumage of the other. On the death of this companion, she appeared restless and inconsolable for several days. On reaching New Orleans, I placed a looking glass beside the place where she usually sat, and the instant she perceived her image, all her former fondness seemed to return, so that she could scarcely absent herself from it a moment. It was evident that she was completely deceived. Always when evening drew on, and often during the day, she laid her head close to that of the image in the glass, and began to doze with great composure and satisfaction. In this short space she had learnt to know her name; to answer and come when called on; to climb up my clothes, sit on my shoulder and eat from my mouth. I took her with me to sea, determined to persevere in her education; but, destined to another fate, poor Poll, having one morning about daybreak wrought her way through the cage, while I was asleep, instantly flew overboard, and perished in the gulf of Mexico.

The Carolina, or Illinois Parrot, (for it has been described under both these appellations) is thirteen inches long, and twenty-one in extent; forehead and cheeks orange red; beyond this, for an inch and a half, down and round the neck, a rich and pure yellow; shoulder and bend of the wing also edged with rich orange red. The general color of the rest of the plumage is a bright yellowish silky green, with light blue reflexions, lightest and most di-

luted with yellow below; greater wing coverts and roots of the primaries yellow, slightly tinged with green; interior webs of the primaries deep dusky purple, almost black, exterior ones bluish green; tail long, cuneiform, consisting of twelve feathers, the exterior one only half the length, the others increasing to the middle ones, which are streaked along the middle with light blue; shafts of all the larger feathers, and of most part of the green plumage black; knees and vent orange yellow; feet a pale whitish flesh color; claws black; bill white, or slightly tinged with pale cream; iris of the eye hazel; round the eye is a small space without feathers covered with a whitish skin; nostrils placed in an elevated membrane at the base of the bill, and covered with feathers; chin wholly bare of feathers, but concealed by those descending on each side; from each side of the palate hangs a lobe or skin of a blackish color; tongue thick and fleshy; inside of the upper mandible near the point grooved exactly like a file, that it may hold with more security.

The female differs very little in her colors and markings from the male. After examining numerous specimens, the following appear to be the principal differences. The yellow on the neck of the female does not descend quite so far; the interior vanes of the primaries are brownish instead of black, and the orange red on the bend and edges of the wing is considerably narrower; in other respects the colors and markings are nearly the same.

The young birds of the preceding year, of both sexes, are generally destitute of the yellow on the head and neck, until about the beginning or middle of March, having those parts wholly green, except the front and cheeks, which are orange red in them as in the full grown birds. Towards the middle of March the yellow begins to appear, in detached feathers, interspersed among the green, varying in different individuals. In some which I killed about the last of that month, only a few green feathers remained among the yellow; and these were fast assuming the yellow tint; for the color changes without change of plumage. A number of

these birds, in all their grades of progressive change from green to yellow, have been deposited in Mr. Peale's museum.

What is called by Europeans the Illinois Parrot, (Psittacus pertinax) is evidently the young bird in its imperfect colors. Whether the present species be found as far south as Brasil, as these writers pretend, I am unable to say; but from the great extent of country in which I have myself killed and examined these birds, I am satisfied that the present species, now described, is the only one inhabiting the United States.

Since the foregoing was written I have had an opportunity, by the death of a tame Carolina parakeet, to ascertain the fact of the poisonous effects of their head and intestines on cats. Having shut up a cat and her two kittens, (the latter only a few days old,) in a room with the head, neck, and whole intestines of the Parakeet, I found on the next morning, the whole eaten except a small part of the bill. The cat exhibited no symptom of sickness; and at this moment, three days after the experiment has been made, she and her kittens are in their usual health. Still, however, the effect might have been different, had the daily food of the bird been cockle burrs, instead of Indian corn.

CANADA FLYCATCHER.

MUSCICAPA CANADENSIS.

[Plate XXVI.—Fig. 2.]

LINN. Syst. 324.—Arct. Zool. p. 338, No. 273.—LATHAM, II, 354.—PEALE'S Museum, No. 6969.

THIS is a solitary, and in the lower parts of Pennsylvania, rather a rare species; being more numerous in the interior, particularly near the mountains, where the only two I ever met with were shot. They are silent birds, as far as I could observe; and were busily darting among the branches after insects. From the specific name given them it is probable that they are more plenty in Canada than in the United States; where it is doubtful whether they be not mere passengers in spring and autumn.

This species is four inches and a half long, and eight in extent; front black; crown dappled with small streaks of grey and spots of black; line from the nostril to and around the eye yellow; below the eye a streak or spot of black, descending along the sides of the throat, which, as well as the breast and belly, is brilliant yellow, the breast being marked with a broad rounding band of black, composed of large irregular streaks; back, wings and tail cinereous brown; vent white; upper mandible dusky, lower flesh colored; legs and feet the same; eye hazel.

Never having met with the female of this bird I am unable at present to say in what its colors differ from those of the male.

HOODED FLYCATCHER.

MUSCICAPA CUCULLATA.

[Plate XXVI.—Fig. 3.]

Le gobe-mouche citrin, Buffon, IV, 538. Pl. Enl. 666.—Hooded Warbler, Arct. Zool. p. 400, No. 287.—Latham, II, 462.—Catesby, I, 60.—Mitred Warbler, Turton, I, 601.—Hooded Warbler, Ibid.—Peale's Museum, No. 7062.

WHY those two judicious naturalists, Pennant and Latham, should have arranged this bird with the Warblers is to me unaccountable; as few of the muscicapæ are more distinctly marked than the species now before us. The bill is broad at the base, where it is beset with bristles; the upper mandible notched, and slightly overhanging at the tip; and the manners of the bird, in every respect, those of a Flycatcher. This species is seldom seen in Pennsylvania and the northern states; but through the whole extent of country south of Maryland, from the Atlantic to the Mississippi, is very abundant. It is however most partial to low situations, where there is plenty of thick underwood; abounds among the canes in the state of Tenessee, and in the Mississippi territory; and seems perpetually in pursuit of winged insects; now and then uttering three loud not unmusical and very lively notes, resembling twee, twee, twitchie, while engaged in the chase. Like almost all its tribe it is full of spirit, and exceedingly active. It builds a very neat and compact nest, generally in the fork of a small bush, forms it outwardly of moss and flax, or broken hemp, and lines it with hair, and sometimes feathers; the eggs are five, of a greyish white, with red spots towards the great end. In all parts of the United States, where it inhabits, it is a bird of passage. At Savannah I met with it about the twentieth of March; so that it probably retires to the

West India islands, and perhaps Mexico, during winter. I also heard this bird among the rank reeds and rushes within a few miles of the mouth of the Mississippi. It has been sometimes seen in the neighbourhood of Philadelphia; but rarely; and on such occasions has all the mute timidity of a stranger, at a distance from home.

This species is five inches and a half long, and eight in extent; forehead, cheeks and chin yellow, surrounded with a hood of black that covers the crown, hind head, and part of the neck, and descends, rounding, over the breast; all the rest of the lower parts are rich yellow; upper parts of the wings, the tail and back, yellow olive; interior vanes and tips of the wing and tail dusky; bill black; legs flesh colored; inner webs of the three exterior tail feathers white for half their length from the tips; the next slightly touched with white; the tail slightly forked, and exteriorly edged with rich yellow olive.

The female has the throat and breast yellow, slightly tinged with blackish; the black does not reach so far down the upper part of the neck, and is not of so deep a tint. In the other parts of her plumage she exactly resembles the male. I have found some females that had little or no black on the head or neck above; but these I took to be young birds, not yet arrived at their full tints.

GREEN BLACK-CAPT FLYCATCHER.

MUSCICAPA PUSILLA.

[Plate XXVI.—Fig. 4.]

PEALE's Museum, No. 7785.

THIS neat and active little species I have never met with in the works of any European naturalist. It is an inhabitant of the swamps of the southern states, and has been several times seen in the lower parts of the states of New Jersey and Delaware. Amidst almost unapproachable thickets of deep morasses it commonly spends its time, during summer, and has a sharp squeaking note, noways musical. It leaves the southern states early in October.

This species is four inches and a half long, and six and a half in extent; front line over the eye and whole lower parts yellow, brightest over the eye and dullest on the cheeks, belly and vent, where it is tinged with olive; upper parts olive green; wings and tail dusky brown, the former very short; legs and bill flesh colored; crown covered with a patch of deep black; iris of the eye hazel.

The female is without the black crown, having that part of a dull yellow olive, and is frequently mistaken for a distinct species. From her great resemblance, however, in other respects to the male, now first figured, she cannot hereafter be mistaken.

PINNATED GROUS.

TETRAO CUPIDO.

[Plate XXVII.—Fig. 1.]

LINN. Syst. I, p. 274, 5.—LATH. II, p. 740.—Arct. Zool.—La Gelinote hupée d'Amerique, Briss. Orn. I, p. 212 10.—Urogalus minor, fuscus cervice, plumis alas imitantibus donatâ, Catesb. Car. App. pl. 1 — Tetrao lagogus, the Mountain cock, or Grous, Bartram, p. 290.—Heath-hen, Prairie hen, Barren-hen.—Peale's Museum, No. 4700, male—4701, female.

BEFORE I enter on a detail of the observations which I have myself personally made on this singular species, I shall lay before the reader a comprehensive and very circumstantial memoir on the subject, communicated to me by the writer, Dr. Samuel L. Mitchell of New York, whose exertions, both in his public and private capacity, in behalf of science, and in elucidating the natural history of his country, are well known; and highly honorable to his distinguished situation and abilities. That peculiar tract generally known by the name of the Brushy plains of Long island, having been, for time immemorial, the resort of the bird now before us, some account of this particular range of country seemed necessarily connected with the subject, and has accordingly been obligingly attended to by the learned professor.

"New York, Sept. 19th, 1810.

" DEAR SIR,

"IT gives me much pleasure to reply to your letter of the twelfth instant, asking of me information concerning the Grouse of Long island.

"The birds which are known there emphatically by the name of Grouse, inhabit chiefly the forest-range. This district of the





island may be estimated as being between forty and fifty miles in length, extending from Bethphage in Queen's county to the neighbourhood of the court-house in Suffolk. Its breadth is not more than six or seven. For although the island is bounded by the Sound separating it from Connecticut on the north; and by the Atlantic ocean on the south, there is a margin of several miles on each side in the actual possession of human beings.

"The region in which these birds reside, lies mostly within the towns of Oysterbay, Huntington, Islip, Smithtown, and Brookhaven; though it would be incorrect to say, that they were not to be met with sometimes in Riverhead and South-hampton.—Their territory has been defined by some sportsmen, as situated between Hempstead-plain on the west, and Shinnecock-plain on the east.

"The more popular name for them is *Heath-hens*. By this they are designated in the act of our legislature for the preservation of them and of other game. I well remember the passing of this law. The bill was introduced by Cornelius J. Bogert, esq. a member of the assembly from the city of New York. It was in the month of February, 1791, the year when as a representative from my native county of Queens, I sat for the first time in a legislature.

"The statute declares among other things, that the person who shall kill any Heath-hen within the counties of Suffolk or Queens, between the first day of April and the fifth day of October, shall for every such offence, forfeit and pay the sum of two dollars and an half, to be recovered with costs of suit, by any person who shall prosecute for the same, before any justice of the peace, in either of the said counties; the one half to be paid to the plaintiff, and the other half to the overseers of the poor. And if any Heath-hen so killed, shall be found in the possession of any person, he shall be deemed guilty of the offence, and suffer the penalty. But it is provided, that no defendant shall be convicted

unless the action shall be brought within three months after the violation of the law.*

"The country selected by these exquisite birds requires a more particular description. You already understand it to be the midland and interior district of the island. The soil of this island is, generally speaking, a sandy or gravelly loam. In the parts less adapted to tillage, it is more of an unmixed sand. This is so much the case, that the shore of the beaches beaten by the ocean, affords a material from which glass has been prepared. Siliceous grains and particles predominate in the region chosen by the Heath-hens or Grouse. Here there are no rocks, and very few stones of any kind. This sandy tract appears to be a dereliction of the ocean, but is nevertheless not doomed to total sterility. Many thousand acres have been reclaimed from the wild state, and rendered very productive to man. And within the towns frequented by these birds, there are numerous inhabitants, and among them some of our most wealthy farmers.

"But within the same limits, there are also tracts of great extent where men have no settlements, and others where the population is spare and scanty. These are however, by no means, naked desarts. They are, on the contrary, covered with trees, shrubs and smaller plants. The trees are mostly pitch-pines of inferior size, and white oaks of a small growth. They are of a quality very fit for burning. Thousands of cords of both sorts of fire-wood are annually exported from these barrens. Vast quantities are occasionally destroyed by the fires which through carelessness or accident spread far and wide through the woods. The city of New York

^{*} The doctor has probably forgotten a circumstance of rather a ludicrous kind that occurred at the passing of this law; and which was, not long ago, related to me by my friend Mr. Gardiner, of Gardiner's island, Long island. The bill was entitled "An Act for the preservation of Heath-hen and other Game." The honest chairman of the assembly, no sportsman I suppose, read the title "An Act for the preservation of Heathen and other Game!" which seemed to astonish the northern members, who could not see the propriety of preserving *Indians*, or any other Heathen.

will probably for ages derive fuel from the grouse-grounds. The land after having been cleared, yields to the cultivator poor crops. Unless therefore he can help it by manure, the best disposition is to let it grow up to forest again. Experience has proved, that in a term of forty or fifty years, the new growth of timber will be fit for the axe. Hence it may be perceived, that the reproduction of trees, and the protection they afford to Heath-hens would be perpetual; or in other words, not circumscribed by any calculable time; provided the persecutors of the latter would be quiet.

"Beneath these trees grow more dwarfish oaks, overspreading the surface, sometimes with here and there a shrub, and sometimes a thicket. These latter are from about two to ten feet in height. Where they are the principal product, they are called in common conversation brush, as the flats on which they grow are termed Brushy plains. Among this hardy shrubbery may frequently be seen the creeping vegetable named the partridge-berry covering the sand with its lasting verdure. In many spots the plant which produces hurtle-berries, sprout up among the other natives of the soil. These are the more important, though I ought to inform you that the hills reaching from east to west, and forming the spine of the island, support kalmias, hickories, and many other species; that I have seen azalias and andromedas as I passed through the wilderness; and that where there is water, crane-berries, alders, beeches, maples, and other lovers of moisture, take their stations.

"This region, situated thus between the more thickly inhabited strips or belts on the north and south sides of the island, is much travelled by waggons, and intersected accordingly by a great number of paths.

"As to the birds themselves, the information I possess scarcely amounts to an entire history. You, who know the difficulty of collecting facts, will be the most ready to excuse my deficiencies. The information I give you is such as I rely on. For the purpose of gathering the materials, I have repeatedly visited their haunts.

I have likewise conversed with several men who were brought up at the precincts of the grouse-ground, who had been witnesses of their habits and manners, who were accustomed to shoot them for the market, and who have acted as guides to gentlemen who go there for sport.

"Bulk.—An adult Grouse when fat weighs as much as a barn door fowl of moderate size, or about three pounds avoirdupoise. But the eagerness of the sportsman is so great, that a large proportion of those they kill, are but a few months old, and have not attained their complete growth. Notwithstanding the protection of the law, it is very common to disregard it. The retired nature of the situation favours this. It is well understood that an arrangement can be made which will blind and silence informers, and that the gun is fired with impunity, for weeks before the time prescribed in the act. To prevent this unfair and unlawful practice, an association was formed a few years ago, under the title of the Brush club, with the express and avowed intention of enforcing the gamelaw. Little benefit, however, has resulted from its laudable exertions; and under a conviction that it was impossible to keep the poachers away, the society declined. At present the statute may be considered as operating very little toward their preservation. Grouse, especially full-grown ones, are becoming less frequent. Their numbers are gradually diminishing; and assailed as they are on all sides, almost without cessation, their scarcity may be viewed as foreboding their eventual extermination.

"Price.—Twenty years ago a brace of Grouse could be bought for a dollar. They now cost from three to five dollars. A handsome pair seldom sells in the New York market now a days for less than thirty shillings [three dollars, seventy-five cents], nor for more than forty [five dollars]. These prices indicate indeed the depreciation of money and the luxury of eating. They prove at the same time, that Grouse are become rare; and this fact is admitted by every man who seeks them, whether for pleasure or for profit.

"Amours.—The season for pairing is in March, and the breeding time is continued through April and May. Then the male Grouse distinguishes himself by a peculiar sound. When he utters it, the parts about the throat are sensibly inflated and swelled. It may be heard on a still morning for three or more miles; some say they have perceived it as far as five or six. This noise is a sort of ventriloquism. It does not strike the ear of a bystander with much force; but impresses him with the idea, though produced within a few rods of him, of a voice a mile or two distant. This note is highly characteristic. Though very peculiar, it is termed tooting, from its resemblance to the blowing of a conch or horn from a remote quarter. The female makes her nest on the ground, in recesses very rarely discovered by men. She usually lays from ten to twelve eggs. Their colour is of a brownish, much resembling those of a Guinea-hen. When hatched, the brood is protected by her alone. Surrounded by her young, the mother bird exceedingly resembles a domestic hen and chickens. She frequently leads them to feed in the roads crossing the woods, on the remains of maize and oats contained in the dung dropped by the travelling horses. In that employment they are often surprised by the passengers. On such occasions the dam utters a cry of alarm. The little ones immediately scamper to the brush; and while they are skulking into places of safety, their anxious parent beguiles the spectator by drooping and fluttering her wings, limping along the path, rolling over in the dirt, and other pretences of inability to walk or fly.

"Food.—A favourite article of their diet is the heath-hen plum, or partridge-berry before mentioned. They are fond of hurtle-berries, and crane-berries. Worms and insects of several kinds are occasionally found in their crops. But in the winter they subsist chiefly on acorns, and the buds of trees which have shed their leaves. In their stomachs have been sometimes observed the leaves of a plant supposed to be a winter green; and it is said, when they are much pinched, they betake themselves to the buds of the pine.

In convenient places they have been known to enter cleared fields, and regale themselves on the leaves of clover; and old gunners have reported that they have been known to trespass upon patches of buckwheat, and pick up the grains.

"Migration.—They are stationary, and never known to quit their abode. There are no facts showing in them any disposition to migration. On frosty mornings and during snows, they perch on the upper branches of pine trees. They avoid wet and swampy places; and are remarkably attached to dry ground. The low and open brush is preferred to high shrubbery and thickets. Into these latter places, they fly for refuge when closely pressed by the hunters; and here, under a stiff and impenetrable cover, they escape the pursuit of dogs and men. Water is so seldom met with on the true grouse-ground, that it is necessary to carry it along for the pointers to drink. The flights of Grouse are short, but sudden, rapid and whirring. I have not heard of any success in taming them. They seem to resist all attempts at domestication. In this as well as in many other respects, they resemble the Quail of New York, or the Partridge of Pennsylvania.

"Manners.—During the period of mating, and while the females are occupied in incubation, the males have a practice of assembling, principally by themselves. To some select and central spot where there is very little underwood, they repair from the adjoining district. From the exercises performed there, this is called a scratching-place. The time of meeting is the break of day. As soon as the light appears, the company assembles from every side, sometimes to the number of forty or fifty. When the dawn is past, the ceremony begins by a low tooting from one of the cocks. This is answered by another. They then come forth one by one from the bushes, and strut about with all the pride and ostentation they can display. Their necks are incurvated; the feathers on them are erected into a sort of ruff; the plumes of their tails are expanded like fans; they strut about in a style resembling, as nearly

as small may be illustrated by great, the pomp of the turkey-cock. They seem to vie with each other in stateliness; and as they pass each other frequently cast looks of insult, and utter notes of defiance. These are the signals for battles. They engage with wonderful spirit and fierceness. During these contests, they leap a foot or two from the ground, and utter a cackling, screaming and discordant cry.

"They have been found in these places of resort even earlier than the appearance of light in the east. This fact has led to the belief that a part of them assemble over night. The rest join them in the morning. This leads to the further belief that they roost on the ground. And the opinion is confirmed by the discovery of little rings of dung, apparently deposited by a flock which had passed the night together. After the appearance of the sun they disperse.

"These places of exhibition have been often discovered by the hunters; and a fatal discovery it has been for the poor Grouse. Their destroyers construct for themselves lurking holes made of pine branches, called bough-houses, within a few yards of the parade. Hither they repair with their fowling-pieces in the latter part of the night, and wait the appearance of the birds. Watching the moment when two are proudly eyeing each other, or engaged in battle; or when a greater number can be seen in a range, they pour on them a destructive charge of shot. This annoyance has been given in so many places, and to such extent, that the Grouse, after having been repeatedly disturbed, are afraid to assemble. On approaching the spot to which their instinct prompts them, they perch on the neighbouring trees, instead of alighting at the scratching place. And it remains to be observed, how far the restless and tormenting spirit of the marksmen, may alter the native habits of the Grouse, and oblige them to betake themselves to new ways of life.

"They commonly keep together in coveys, or packs, as the phrase is, until the pairing season. A full pack consists of course

of ten or a dozen. Two packs have been known to associate. I lately heard of one whose number amounted to twenty-two. They are so unapt to be startled, that a hunter, assisted by a dog, has been able to shoot almost a whole pack, without making any of them take wing. In like manner the men lying in concealment near the scratching places, have been known to discharge several guns before either the report of the explosion, or the sight of their wounded and dead fellows would rouse them to flight. It has further been remarked, that when a company of sportsmen have surrounded a pack of Grouse, the birds seldom or never rise upon their pinions while they are encircled; but each runs along until it passes the person that is nearest, and then flutters off with the utmost expedition.

"As you have made no inquiry of me concerning the ornithological character of these birds, I have not mentioned it, presuming that you are already perfectly acquainted with their classification and description. In a short memoir written in 1803, and printed in the eighth volume of the Medical Repository, I ventured an opinion as to the genus and species. Whether I was correct is a technical matter, which I leave you to adjust. I am well aware that European accounts of our productions are often erroneous, and require revision and amendment. This you must perform. For me it remains to repeat my joy at the opportunity your invitation has afforded me to contribute somewhat to your elegant work, and at the same time to assure you of my earnest hope that you may be favoured with ample means to complete it.

"SAMUEL L. MITCHILL."

Duly sensible of the honor of the foregoing communication, and grateful for the good wishes with which it is concluded, I shall now, in further elucidation of the subject, subjoin a few particulars properly belonging to my own department.

It is somewhat extraordinary that the European naturalists, in their various accounts of our different species of Grous, should have said little or nothing of the one now before us, which, in its voice, manners, and peculiarity of plumage, is the most singular, and in its flesh the most excellent, of all those of its tribe that inhabit the territory of the United States. It seems to have escaped Catesby during his residence and different tours through this country, and it was not till more than twenty years after his return to England, viz. in 1743, that he first saw some of these birds, as he informs us, at Cheswick, the seat of the earl of Wilmington. His lordship said they came from America; but from what particular part could not tell.* Buffon has confounded it with the Ruffed Grous, the common Partridge of New England, or Pheasant of Pennsylvania (Tetrao umbellus); Edwards and Pennant, have, however, discovered that it is a different species; but have said little of its note, of its flesh, or peculiarities; for alas! there was neither voice, nor action, nor delicacy of flavour in the shrunk and decayed skin from which the former took his figure, and the latter his description; and to this circumstance must be attributed the barrenness and defects of both.

That the curious may have an opportunity of examining to more advantage this singular bird, a figure of the male is here given, as large as life, drawn with great care from the most perfect of several elegant specimens shot in the barrens of Kentucky. He is represented in the act of *strutting*, as it is called, while with inflated throat he produces that extraordinary sound so familiar to every one who resides in his vicinity, and which has been described in the foregoing account. So very novel and characteristic did the action of these birds appear to me at first sight, that, instead of shooting them down, I sketched their attitude hastily on the spot, while concealed among a brush-heap, with seven or eight of them

within a short distance. Three of these I afterwards carried home with me.

This rare bird, tho an inhabitant of different and very distant districts of North America, is extremely particular in selecting his place of residence; pitching only upon those tracts whose features and productions correspond with his modes of life; and avoiding immense intermediate regions that he never visits. Open dry plains, thinly interspersed with trees, or partially overgrown with shrub-oak, are his favorite haunts. Accordingly we find these birds on the Grous plains of New Jersey, in Burlington county, as well as on the Brushy plains of Long island—among the pines and shrub-oaks of Pocano, in Northampton county, Pennsylvania—over the whole extent of the Barrens of Kentucky—on the luxuriant plains and prairies of the Indiana territory, and Upper Louisiana; and according to the information of the late governor Lewis, on the vast and remote plains of the Columbia river. In all these places preserving the same singular habits.

Their predilection for such situations will be best accounted for by considering the following facts and circumstances. First, their mode of flight is generally direct, and laborious, and ill calculated for the labyrinth of a high and thick forest, crowded and intersected with trunks and arms of trees, that require continual angular evolution of wing, or sudden turnings, to which they are by no means accustomed. I have always observed them to avoid the high-timbered groves that occur here and there in the barrens. Connected with this fact is a circumstance related to me by a very respectable inhabitant of that country, viz. that one forenoon a cock Grous struck the stone chimney of his house with such force as instantly to fall dead to the ground.

Secondly, their known dislike of ponds, marshes, or watery places, which they avoid on all occasions, drinking but seldom, and, it is believed, never from such places. Even in confinement this peculiarity has been taken notice of. While I was in the

state of Tennesee, a person living within a few miles of Nashville had caught an old hen Grous in a trap; and being obliged to keep her in a large cage, as she struck and abused the rest of the poultry, he remarked that she never drank; and that she even avoided that quarter of the cage where the cup containing the water was placed. Happening one day to let some water fall on the cage, it trickled down in drops along the bars, which the bird no sooner observed, than she eagerly picked them off, drop by drop, with a dexterity that shewed she had been habituated to this mode of quenching her thirst; and probably to this mode only, in those dry and barren tracts, where, except the drops of dew and drops of rain, water is very rarely to be met with. For the space of a week he watched her closely to discover whether she still refused to drink; but, tho she was constantly fed on Indian corn, the cup and water still remained untouched and untasted. Yet no sooner did he again sprinkle water on the bars of the cage, than she eagerly and rapidly picked them off as before.

The last, and probably the strongest inducement to their preferring these plains, is the small acorn of the shrub-oak; the strawberries, huckle berries, and partridge berries with which they abound, and which constitute the principal part of the food of these birds. These brushy thickets also afford them excellent shelter, being almost impenetrable to dogs or birds of prey.

In all these places where they inhabit they are, in the strictest sense of the word, resident; having their particular haunts, and places of rendezvous, (as described in the preceding account,) to which they are strongly attached. Yet they have been known to abandon an entire tract of such country, when, from whatever cause it might proceed, it became again covered with forest. A few miles south of the town of York, in Pennsylvania, commences an extent of country, formerly of the character described, now chiefly covered with wood; but still retaining the name of barrens. In the recollection of an old man born in that part of the country, this tract

abounded with Grous. The timber growing up, in progress of years, these birds totally disappeared; and for a long period of time he had seen none of them; until migrating with his family to Kentucky, on entering the barrens he one morning recognized the well known music of his old acquaintance the Grous; which he assures me are the very same with those he had known in Pennsylvania.

But what appears to me the most remarkable circumstance relative to this bird is, that not one of all those writers who have attempted its history have taken the least notice of those two extraordinary bags of yellow skin which mark the neck of the male, and which constitute so striking a peculiarity. These appear to be formed by an expansion of the gullet as well as of the exterior skin of the neck, which, when the bird is at rest, hangs in loose pendulous wrinkled folds, along the side of the neck, the supplemental wings, at the same time, as well as when the bird is flying, lying along the neck in the manner represented in one of the distant figures on the plate. But when these bags are inflated with air, in breeding time, they are equal in size and very much resemble in color a middle sized fully ripe orange. By means of this curious apparatus, which is very observable several hundred yards off, he is enabled to produce the extraordinary sound mentioned above, which, tho it may easily be imitated, is yet difficult to describe by words. It consists of three notes, of the same tone, resembling those produced by the Night Hawks in their rapid descent; each strongly accented, the last being twice as long as the others. When several are thus engaged the ear is unable to distinguish the regularity of these triple notes, there being at such times one continued bumming, which is disagreeable and perplexing, from the impossibility of ascertaining from what distance or even quarter it proceeds. While uttering this the bird exhibits all the ostentatious gesticulations of a turkey-cock; erecting and fluttering his neck wings, wheeling and passing before the female and close before his

fellows, as in defiance. Now and then are heard some rapid cackling notes, not unlike that of a person tickled to excessive laughter; and in short one can scarcely listen to them without feeling disposed to laugh from sympathy. These are uttered by the males while engaged in fight, on which occasion they leap up against each other, exactly in the manner of turkeys, seemingly with more malice than effect. This bumming continues from a little before day-break to eight or nine o'clock in the morning, when the parties separate to seek for food.

Fresh ploughed fields, in the vicinity of their resorts, are sure to be visited by these birds every morning, and frequently also in the evening. On one of these I counted, at one time, seventeen males, most of whom were in the attitude represented in the plate; making such a continued sound as I am persuaded might have been heard for more than a mile off. The people of the barrens informed me, that when the weather became severe, with snow, they approach the barn and farm-house; are sometimes seen sitting on the fences in dozens; mix with the poultry, and glean up the scattered grains of Indian corn; seeming almost half domesticated. At such times great numbers are taken in traps. No pains, however, or regular plan has ever been persisted in, as far as I was informed, to domesticate these delicious birds. A Mr. Reed who lives between the Pilot Knobs and Bairdstown, told me, that a few years ago one of his sons found a Grous's nest with fifteen eggs, which he brought home, and immediately placed below a hen then sitting; taking away her own. The nest of the Grous was on the ground, under a tussock of long grass, formed with very little art and few materials; the eggs were brownish white, and about the size of a pullet's. In three or four days the whole were hatched. Instead of following the hen, they compelled her to run after them, distracting her with the extent and diversity of their wanderings; and it was a day or two before they seemed to understand her language, or consent to be guided by her. They were let out to

the fields, where they paid little regard to their nurse; and in a few days only three of them remained. These became extremely tame and familiar, were most expert fly-catchers; but soon after they also disappeared.

The Pinnated Grous is nineteen inches long, twenty-seven inches in extent, and when in good order, weighs about three pounds and a half; the neck is furnished with supplemental wings, each composed of eighteen feathers, five of which are black, and about three inches long, the rest shorter, also black, streaked laterally with brown, and of unequal lengths; the head is slightly crested; over the eye is an elegant semicircular comb of rich orange, which the bird has the power of raising or relaxing; under the neck wings are two loose pendulous and wrinkled skins, extending along the side of the neck for two-thirds of its length, each of which, when inflated with air, resembles, in bulk, color and surface a middle sized orange; chin cream-colored; under the eye runs a dark streak of brown; whole upper parts mottled transversely with black, reddish brown and white; tail short, very much rounded, and of a plain brownish soot color; throat elegantly marked with touches of reddish brown, white and black; lower part of the breast and belly pale brown, marked transversely with white; legs covered to the toes with hairy down of a dirty drab color; feet dull yellow, toes pectinated; vent whitish; bill brownish horn color; eye reddish hazel. The female is considerably less, of a lighter color; destitute of the neck wings, the naked yellow skin on the neck, and the semicircular comb of yellow over the eye, will be and make better at

On dissecting these birds the gizzard was found extremely muscular, having almost the hardness of a stone; the heart remarkably large; the crop was filled with briar knots, containing the larvæ of some insect,—quantities of a species of green lichen, small hard seeds, and some grains of Indian corn.

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BLUE-GREEN WARBLER.

SYLVIA RARA.

[Plate XXVII.—Fig. 2.]

PEALE's Museum, No. 7788

THIS new species, the only one of its sort I have yet met with, was shot on the banks of Cumberland river, about the beginning of April; and the drawing made with care immediately after. Whether male or female I am uncertain. It is one of those birds that usually glean among the high branches of the tallest trees, which render it difficult to be procured. It was darting about with great nimbleness among the leaves, and appeared to have many of the habits of the Flycatcher. After several ineffectual excursions in search of another of the same kind, with which I might compare the present, I am obliged to introduce it with this brief account.

The specimen has been deposited in Mr. Peale's museum.

The Blue-green Warbler is four inches and a half long, and seven and a half in extent; the upper parts are verditer, tinged with pale green, brightest on the front and forehead; lores, line over the eye, throat, and whole lower parts very pale cream; cheeks slightly tinged with greenish; bill and legs bright light blue, except the upper mandible, which is dusky; tail forked, and, as well as the wings brownish black; the former marked on the three exterior vanes with white and edged with greenish; the latter having the first and second row of coverts tipt with white. Note a feeble chirp.

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NASHVILLE WARBLER.

SYLVIA RUFICAPILLA.

[Plate XXVII.—Fig. 3.]

PEALE'S Museum, No. 7789.

THE very uncommon notes of this little bird were familiar to me for several days before I succeeded in obtaining it. These notes very much resembled the breaking of small dry twigs, or the striking of small pebbles of different sizes smartly against each other for six or seven times, and loud enough to be heard at the distance of thirty or forty yards. It was some time before I could ascertain whether the sound proceeded from a bird or an insect. At length I discovered the bird; and was not a little gratified at finding it an entire new and hitherto undescribed species. I was also fortunate enough to meet afterwards with two others exactly corresponding with the first, all of them being males. These were shot in the state of Tennesee, not far from Nashville. It had all the agility and active habits of its family the Worm-eaters.

The length of this species is four inches and a half, breadth seven inches; the upper parts of the head and neck light ash, a little inclining to olive; crown spotted with deep chesnut in small touches; a pale yellowish ring round the eye; whole lower parts vivid yellow, except the middle of the belly, which is white; back yellow olive, slightly skirted with ash; rump and tail coverts rich yellow olive; wings nearly black, broadly edged with olive; tail slightly forked and very dark olive; legs ash; feet dirty yellow; bill tapering to a fine point, and dusky ash; no white on wings or tail; eye hazel.











